Commercial Fisheries Abstracts

a monthly summary of important developments for the fishery industries

STANSBY M.E.

Triennial Index

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The abstracts in this leaflet may be left in their present form; but it is suggested that to make the most efficient use of them, they be cut out on the lines designated and filed by the number in the upper left-hand corner of each. For a full description of this filing system see "Fishery Technological Abstract Card System" by Maurice E. Stansby and K. L. Osterhaug, Fishery Leaflet No. 232, obtainable free by request from Fish and Wildlife Service, Washington 25, D. C.

In addition to the regular abstracts, there is included a bibliography of references of secondary importance (without abstracts). These may be cut off on the lines designated and pasted on standard 3 x 5-inch cards for filing.

Following is a brief outline of this filing system. The numbers apply to the first digit appearing on each card. For the meaning of subsequent digits, please see the above described leaflet.

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3 Preserved fish
4 Oils
5 Vitamins
6 Fishery by-products
7 Analytical Methods
8 Composition
9 Miscellaneous

Issued with the approval of the Bureau of the Budget, December 29, 1950

TRIENNIAL INDEX OF COMMERCIAL FISHERIES ABSTRACTS 1948-1950

by Maurice E. Stansby 1/

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INTRODUCTION

Commercial Fisheries Abstracts was inaugurated as a monthly periodical by the Fish and Wildlife Service in January 1948. This journal publishes abstracts of the most important articles appearing in American publications in the field of commercial fisheries with particular emphasis on fishery technology. Some of the more important English language periodicals in foreign countries are also covered and occasionally important articles appearing in foreign languages are abstracted. Four abstracts are published to a page as they are intended to be cut into three by five inch cards and filed according to subject classification. An extensive subject classification code system has been devised 2/ and each abstract card bears a code number descriptive of the principal subject content. Additional cross-reference titles are also sometimes published with subject code numbers of secondary importance. These can be cut and pasted on cards for setting up a completely indexed, cross-referenced abstract card file.

Many users of Commercial Fisheries Abstracts do not cut and file the individual cards. Such users have had only the brief subject index published at the back of each issue. With the increasing number of issues (36) available, it becomes a time-consuming process to try to find the location of material on any desired subject since it would be necessary to look through each monthly index to find material on a given subject. The purpose of this index is to provide a ready method of location of material by subject or author for those persons who do not cut and file the abstracts from the periodical. It also will be of value as an author index for those who cut the cards and file them by subject only. Furthermore, the index serves as an author and subject bibliography of fishery technology in the United States for the years 1948-1950 quite independent of the abstracts.

In developing the index, complete coverage was made of all full abstracts appearing in the first three years of the abstracts. In addition to the full abstracts, numerous articles have been listed by title only or with only a sentence or two of abstract. These listings, referred to as "bibliographies", cover subjects of border-line importance. In this index, only the most important "bibliographies" have been included in the index.

The author index is compiled in the simplest possible form. No titles are listed, nor are articles by more than one author listed in such a way that such multiple authorship is indicated. Each author, whether junior or senior, is listed alphabetically. The other information given includes page, year, and month of the Commercial Fisheries Abstract issue in which the abstract appeared.

1/ Chief, Pacific Coast and Alaska Technological Research, and Associate Editor, COMMERCIAL FISHERIES ABSTRACTS.

2/ Stansby, M. E. and Osterhaug, K. L. 1950 Fishery Technological Abstract Card System, U. S. Dept. Interior, Fish and Wildlife Service, Fishery Leaflet 232, 20 pp (Mimeo).

The subject index is more comprehensive and lists the full title of the article, all authors' names, and month and year of the abstract in Commercial Fisheries Abstracts. Where no author's name is listed the article is anonymous. The arrangement of the subject index is according to the following main subjects headings:

MAIN SUBJECT CLASSIFICATIONS FOR INDEXING COMMERCIAL FISHERIES ABSTRACTS

African Fisheries
Analysis, General
Analysis, Inorganic
Analysis, Moisture
Analysis, Organic
Analysis, Vitamins, Vitamin A.
Analysis, Vitamins, B Complex
Analysis, Vitamins, Miscellaneous
Analysis and composition, Specifications and oil constants
Antioxidants
Apparatus and Equipment, Laboratory and Plant
Asiatic Fisheries
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Composition, Organic
Composition, Vitamins
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Economics and Statistics
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Handling Fresh Fish
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Marine Plant Products
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Preservatives and Sanitation
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Transportation
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Vessels, Fishing Material
Vitamin A, Chemistry of
Vitamin A, Therapy
Vitamin B Complex, Miscellaneous
Vitamin B_{12} and Animal Protein Factor
Whales and Whaling
World Fisheries

These main subject classifications are used not only in this triennial index but they have now been standardized upon for use in the brief monthly index which appears at the end of each issue. Many of the main subject headings have been broken down into several subheadings.

In addition to the main subject classifications, numerous cross references are listed in this index to facilitate finding material for which the user might look in more than one place. The cross-reference listings do not include any specific references to titles but merely refer the reader to the proper main classification (and sometimes subheading) under which the material will be found. Subheading listings in these cross references are separated from the main headings by a dash. For example a cross reference is listed as follows:

"Abalone (see SHELLFISH AND CRUSTACEANS, MISCELLANEOUS - Abalone)". This means that articles on the subject of Abalone are to be found in the alphabetical subject index under "SHELLFISH AND CRUSTACEANS, MISCELLANEOUS" and under the subheading of this listing of "Abalone".

The number of abstracts appearing in the different fields is an indication of the amount of research being carried out among the various phases of fishery technology. More abstracts (217) appeared in the field of freezing and frozen fish than in any other. Abstracts on vitamin B_{12} and the animal protein factor numbered 103. Handling of fresh fish was covered in 84 abstracts; canned fish, 77; smoked fish, 26; and salt fish, 20. There were 44 abstracts on tuna, 33 on cod, haddock, and other members of cod family, and 30 on herring. Ocean Perch, (Rosefish) a species exceeding cod or haddock in volume of landings in the important New England fishery, is not covered in a single abstract in the three-year period.

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	Dec. 50	19	5.41
	May 50	23	8.50

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Comfort, A.	May 50	23	8.50
	Dec. 50	1	6.9
Comings, E. W.	May 48	7	3.231
Conger, T. W.	July 48	15	5.11
Cook, G. H.	Jan. 50	15	2.19
Cook, S. V.	Nov. 50	15	3.238
Cook, W. H.	June 48	11	3.26
	Nov. 48	13	3.26
	Mar. 50	23	6.3
Cooke, N. E.	July 48	13	7.2
	Nov. 48	11	6.9
	Jan. 50	21	4.6
	Mar. 50	1	6.9
	Mar. 50	9	5.9
	June 50	1	6.9
	Oct. 50	5	9.14
Cooley, M. L.	Aug. 49	3	7.6132
Coombes, A. I.	Nov. 48	7	7.6132
Corbett, J. T.	Sept. 49	23	6.10
Cords, F.	Dec. 50	9	5.41
Couch, J. R.	Sept. 50	9	5.41
	Oct. 50	21	6.192
Cover, S.	Sept. 49	23	3.39
Cowan, J. C.	Feb. 49	1	4.6
	April 49	19	4.0
	Aug. 50	17	7.80
Cowley, R. F.	June 48	9	8.610
Cowley, W. M.	July 50	7	3.338
Cox, R. P.	June 48	11	4.21
Craig, L. C.	July 49	17	7.2
Crane, B.	Feb. 49	5	0.112
Cravens, W. W.	Oct. 48	7	6.19
	Oct. 48	17	6.19
	Aug. 49	7	5.4
	June 50	9	5.41
Crawshaw, S. L.	Jan. 50	31	2.114
Crocker, E. C.	Mar. 49	15	7.89
Crowther, H. E.	Dec. 48	3	4.6
Culbertson, C. C.	Mar. 48	17	6.19
	Feb. 50	13	5.41
	Nov. 50	9	5.41
Cunha, T. J.	Dec. 49	11	5.41
	Dec. 49	9	5.41
	Mar. 50	1	5.41
	Mar. 50	15	5.41
	Aug. 50	19	5.41
Curnock, D.	Sept. 48	15	2.116
Cuthbertson, D. P.	June 48	1	0.7
Cuthbertson, W. F. J.	April 50	11	7.641
Cutting, C. L.	Feb. 48	13	3.63
	Nov. 49	11	2.19
	Nov. 49	17	2.02
Dahlstrom, R. V.	Dec. 50	17	5.41
Dale, W. M.	May 50	21	0.115
Daly, D. M.	April 48	3	2.5
Daniel, R. J.	May 50	21	8.69
Darling, D. B.	Aug. 50	15	4.65
Dassow, J. A.	June 48	1	3.239
	June 49	11	7.592
	Dec. 49	1	4.6
	Dec. 49	13	3.249
	May 50	23	3.2
	Sept. 50	13	1.86
Datta, S. P.	Feb. 50	19	7.61
Daugherty, A. E.	Sept. 50	21	1.2
Davies, A. W.	Dec. 48	3	5.12
	Mar. 50	11	8.6179
Davis, G. K.	Jan. 49	21	6.19
Davis, N. C.	July 49	5	5.2
Day, D. I.	April 50	17	6.19
	July 50	21	6.19
Day, H. O.	July 50	25	7.81
Dean, M. E.	Nov. 49	23	6.3
Deas, C. P.	Feb. 48	9	6.19
	Nov. 48	5	6.9
	Mar. 49	13	6.19
	Jan. 50	9	8.51
	Sept. 50	11	8.51
Del Pomo, M.	May 50	3	8.53
Dennis, P. O.	Mar. 50	21	7.64
Denton, C. A.	Mar. 49	3	5.4
Derby, J. V.	Dec. 48	17	5.12
Deuel, H. J. Jr.	Feb. 49	7	5.12
	Sept. 50	15	7.610
Devadatta, S. C.	July 49	23	2.9
DeWitt, J. B.	Dec. 48	17	5.12
Dick, J.	Dec. 50	3	8.42
Dietrich, L. S.	Aug. 49	7	5.4
	Aug. 50	21	7.641
Dillon, C. E.	Nov. 49	13	3.4
Dilsaver, E. M.	Sept. 49	23	3.39
Donaldson, L. R.	Jan. 49	19	9.16
Dornbush, A. C.	Mar. 50	23	5.41
	May 50	1	7.641
Downing, J. F.	Mar. 50	21	5.41
Downs, M. L.	April 48	17	3.238
Dreosti, G. M.	April 48	15	3.63, 6.9
	Nov. 48	3	3.33
	Mar. 49	17	1.70
	Oct. 49	17	6.132
	Sept. 50	25	2.19
	Oct. 50	11	6.132
	Nov. 50	7	2.00
Dryden, C. E.	Jan. 48	15	6.133
Dryden, L. P.	April 50	1	5.41
DuBois, C. W.	Mar. 49	17	1.85
	Aug. 49	3	4.6
	July 50	5	1.85
Dugan, L. R. Jr.	Mar. 50	1	4.6
Dugan, R. E.	Nov. 48	15	7.89
	Dec. 50	1	8.8
Duisberg, P. C.	Feb. 50	3	7.595
Dumont, W. H.	Nov. 49	15	1.87
Dunn, A. F.	Nov. 50	19	2.115

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Dunn, C. G.	Jan. 48	5	3.12
Dunn, H. J.	Aug. 49	11	6.19
	Nov. 49	13	4.90
Dunn, M. S.	May 50	5	8.51
Dussault, H. P.	April 49	17	2.01
Dutcher, R. A.	Aug. 48	15	7.611
Dutton, H. J.	Feb. 49	1	4.6
	Aug. 50	17	7.80
Dwyer, J. J.	Sept. 49	17	3.338
Dyer, F. E.	Mar. 48	21	2.19
	July 49	1	2.00
_____	April 50	13	2.00
_____	Nov. 50	15	2.01
Dyer, I. A.	Feb. 50	7	6.19
Dyer, W. J.	Mar. 48	21	2.19
	July 49	1	2.00
_____	Sept. 49	19	3.5
_____	Oct. 49	5	3.12
_____	Jan. 50	9	2.01
_____	April 50	13	2.00
_____	June 50	5	7.51
_____	June 50	21	7.81
_____	Oct. 50	19	3.4
_____	Nov. 50	15	2.01
Dymond, J. R.	Aug. 49	17	9.4
Dyniewicz, H. A.	July 50	21	5.12
Earle, I. P.	Mar. 48	5	5.12
Eckey, E. W.	Oct. 48	11	4.29
Eckles, H. H.	Feb. 50	19	1.0112
Ecklund, O. F.	Mar. 50	21	0.113
Eckstein, A. M.	Oct. 49	21	1.86
Eddy, D.	Oct. 49	3	2.116
Ede, A. J.	Aug. 49	19	3.234
	Mar. 50	3	6.134
Eden, E.	Nov. 48	11	5.12
Edgerton, R. O.	July 48	21	5.11
Edwards, H. M.	Aug. 50	19	5.41
Edwards, J. O.	June 48	19	2.43
Edwards, N. W.	June 50	21	2.112
	July 50	25	2.1121
Ehronkranz, F.	Feb. 50	23	3.231
Eiduson, S.	May 50	5	8.51
Eigen, E.	Mar. 50	9	7.641
	Mar. 50	23	7.641
Elder, L. W.	Jan. 50	17	2.43
Elgin, J. C.	May 50	1	0.8
Ellenberger, H. A.	Aug. 48	15	7.611
_____	July 49	1	7.61
_____	Oct. 49	19	5.11
_____	Feb. 50	1	7.610
Elliott, R. P.	Dec. 48	1	2.112
_____	April 49	1	7.85
_____	July 50	17	9.7
Ellson, J. G.	Jan. 48	19	9.3
_____	July 50	15	2.12
Elm, A. C.	April 49	19	4.0
El-Sadr, M. M.	Jan. 49	23	2.9
Elvehjem, C. A.	Mar. 48	15	3.39
Elvehjem, C. A.	Oct. 48	7	6.19
	Oct. 48	17	6.19
_____	June 49	5	0.7
_____	Aug. 49	7	5.4
_____	Feb. 50	23	5.4
_____	May 50	3	8.64
_____	May 50	5	8.51
_____	June 50	9	5.41
_____	Aug. 50	21	7.641
Embree, N. D.	Sept. 50	15	7.610
Emerson, G. A.	July 49	3	5.4
Emerson, R.	Dec. 48	5	6.19
	Oct. 49	13	6.19
Emery, A. H.	Oct. 50	15	9.6
Emery, W. B.	April 50	23	7.641
Engel'hardt, V. A.	April 49	23	0.38
Epstein, M.	Oct. 48	1	6.19
Erickson, E. M.	July 49	19	5.12
Ershoff, B. H.	Dec. 49	7	5.9
Essary, E. O.	Dec. 48	5	6.19
Esselen, W. B.	May 48	9	3.33
	Sept. 49	17	3.338
Eusebi, A. J.	Feb. 50	23	5.2
Evans, C. D.	Aug. 50	17	7.80
Evers, C. F.	April 49	11	3.2
	June 50	5	3.238
Exner	April 49	21	6.19
Farber, L.	Mar. 50	25	7.879
Farrar, B.	Mar. 50	7	2.111
Fawcett, E. W. M.	Feb. 49	5	6.137
Feener, S. L.	Sept. 49	5	6.13
Felin, F. E.	Sept. 50	21	1.2
Fellers, C. R.	Nov. 48	9	7.80
	Feb. 49	17	8.7
_____	Nov. 49	3	2.00
_____	Nov. 49	19	7.0
Felsing, W. A.	July 50	25	7.61
Fenander, Jean-Marie	Jan. 48	7	2.112
Feofilaktov, V. V.	Mar. 48	13	8.51
Ferguson, W. E. J.	Nov. 50	11	2.01
Ferris, R. E.	Aug. 49	17	1.016
Fieger, E. A.	Oct. 48	19	1.85
	Mar. 49	17	1.85
_____	July 50	5	1.85
_____	Nov. 50	17	2.01
Fields, G. W.	Dec. 50	17	1.9
Finn, D. B.	Nov. 49	15	1.01
Finnegan, W. J.	Jan. 50	11	3.234
Firth, F. E.	July 48	17	1.012
	Aug. 48	21	2.111
Fisher, H. J.	Mar. 50	17	2.14
Fitch, J. E.	July 49	15	1.79
Fitzgerald, G. A.	Feb. 48	15	3.18
	July 48	25	8.8
Fitzhugh, O. G.	July 48	9	3.18
Flower, H. B.	May 49	7	1.81
Folkers, K.	Mar. 49	5	5.4

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Folkers, K.	Aug. 49	1	5.4
	Sept. 49	23	7.64
Folkvord, S.	Jan. 50	21	3.39
Ford, I. A. M.	Oct. 50	21	7.81
Formo, M. V.	Oct. 49	1	6.138
Fougere, H.	Sept. 48	17	3.7
	July 50	9	3.7
Fox, S. A.	June 49	23	7.64
Foy, J. R.	July 48	13	7.61
Fraenkel-Conrat, H.	April 50	21	0.33
Francis, S. E.	July 49	9	2.14
Franklin, A. L.	Oct. 48	1	6.19
_____	Dec. 49	7	5.41
_____	Mar. 50	23	5.41
French, H. V.	June 50	5	7.51
Fricke, H. H.	Feb. 50	3	5.41
Friedman, S. J.	May 50	1	0.8
Fritz, J. C.	July 49	5	5.4
Frost, D. V.	Feb. 50	3	5.41
Frostenson, G.	Aug. 49	13	1.014
Fryd, C. F. M.	Oct. 50	9	7.43
Fuentes, C.	June 48	9	8.610
Fuess, J. C.	Mar. 50	19	1.016
Fukatko	April 49	21	6.19
Furk, D. M.	Sept. 50	7	2.9
Gane, R.	Mar. 48	23	3.231
	Jan. 50	11	3.230
Ganuchean, J. J.	May 49	17	3.33
Gardner, J. S.	May 48	9	3.30
Gee, Owen F.	May 49	3	5.0
Genghof, Dorothy	April 49	23	7.64
Gerhardsen, G. M.	Nov. 49	1	3.5
German, H. L.	April 48	5	6.19
Gershon, H.	July 49	15	8.51
Gertenbach, L. P. D.	Nov. 49	1	3.5
Geurin, H. B.	Mar. 50	1	6.15
	May 50	13	6.19
Gibbard, J.	July 48	17	2.9
Gibson, G. T.	May 49	9	7.613
Gillies, R. S.	Jan. 48	5	3.338
Gladding, J. K.	July 48	13	5.11
Glasscock, R. S.	Dec. 49	9	5.41
_____	Dec. 49	11	5.41
_____	Mar. 50	1	5.41
_____	Aug. 50	19	5.41
Glover, J.	Nov. 48	11	8.6176
	Mar. 49	17	5.12
_____	Mar. 49	19	5.12
Gloyer, S. W.	July 48	23	6.237
Glud, J. B.	Jan. 49	19	1.82
	Jan. 50	29	1.81
Godsil, H. S.	Mar. 49	1	1.1
Godson, J.	Sept. 49	7	6.3
Goeser, P. A.	April 50	13	3.234

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Goldbeck, C. G.	Mar. 48	17	8.64
Goldblith, S. A.	July 48	3	2.8
	June 50	17	2.03
_____	Aug. 50	13	2.03
Goodwin, T. W.	Dec. 48	9	5.11
	Mar. 49	19	5.12
Gortner, W. A.	Mar. 48	19	7.872
Goss, W. H.	Feb. 49	23	6.133
	Feb. 50	9	6.137
Graham, W. D.	Nov. 48	7	6.19
_____	Feb. 49	19	0.7
	May 50	21	0.33
Grangaud, R.	Aug. 49	9	8.612
Graver, D. W.	April 50	25	8.0
Gray, J. B.	May 50	1	0.8
Green, M.	April 50	5	1.85
	July 50	5	1.85
_____	Nov. 50	17	2.01
Greene, R. O.	Sept. 49	7	7.64
Gridgeman, N. T.	May 49	9	7.613
Griffin, E. L.	June 50	21	7.611
Grindel, M. A.	Mar. 48	3	7.461
Groschke, A. C.	April 48	5	6.19
_____	Nov. 48	1	6.19
_____	Nov. 49	5	5.41
Grossi, F. X.	July 48	5	5.11
_____	July 48	13	5.11
	July 48	21	5.11
Grove, C. S. Jr.	May 50	1	0.8
Gudger, E. W.	Feb. 49	1	2.41
Guerrant, N. B.	Aug. 48	15	7.611
_____	April 49	19	5.12
_____	July 49	1	7.61
_____	July 49	7	5.12
_____	Oct. 49	19	5.11
_____	Feb. 50	1	7.610
Gunther, J. K.	Aug. 49	23	6.134
Gurcay, R.	Nov. 48	9	5.12
_____	Nov. 50	3	5.127
Guttman, A.	Sept. 50	1	6.9
Guymon, J. F.	June 49	19	7.80
Gyorgy, P.	Sept. 49	23	4.6
Hagen, E. C.	Oct. 49	1	4.6
Haines, R. B.	Dec. 49	11	3.19
Halbrook, E. R.	Dec. 48	1	6.19
_____	Jan. 49	1	6.19
_____	Nov. 50	21	6.192
_____	Dec. 50	9	5.41
Hall, E. G.	April 48	11	2.4
Hall, J. L.	Sept. 49	1	4.21
Hall, L. A.	June 49	11	0.32
Halpern, G. R.	Oct. 48	17	5.12
	June 49	9	6.249
Halpin, J. G.	Oct. 48	17	6.19
	June 50	9	5.41

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Halverson, A. W.	Sept. 50	3	5.112
Halvorson, H. A.	June 50	21	7.611
Hamilton, T. S.	Feb. 50	5	6.19
Hammer, D.	Jan. 48	19	4.6
Handschumaker, E.	Sept. 50	15	7.610
Hanna, E. J.	May 50	17	0.12
Hanze, A. R.	July 48	15	5.11
Harding, W. M.	Mar. 49	7	5.4
Hardy, A. C.	Mar. 48	23	2.118
Harley, H. Jr.	Mar. 50	21	5.41
Harris, B. L.	May 50	1	0.8
Harris, J. P.	July 48	17	6.133
Harris, P. L.	Mar. 49	11	7.67
	June 50	1	8.69
Harrison, J. S. M.	July 48	25	3.26
	May 49	9	3.33
	Dec. 49	13	3.33
	June 50	11	3.4
	Dec. 50	7	3.33
Harrison, R. W.	Sept. 50	15	7.610
Hart, E. B.	Sept. 50	3	5.112
Hartman, A. M.	April 50	1	5.41
Hartman, L.	July 50	11	6.237
Hartshorne, J. C.	May 48	11	2.3
Harvey, E. W.	Oct. 48	13	1.86
Haslewood, G. A. D.	Feb. 49	31	1.95
Hasslauer, V.	Jan. 48	9	6.9
Hata, C.	July 48	31	4.15
Hauge, S. M.	Aug. 48	5	5.12
	Aug. 48	7	6.19
	Nov. 48	13	6.19
	April 49	17	6.19
	May 50	11	5.41
Hayner, G. A.	Nov. 50	15	3.238
Hays, R.	Sept. 49	23	3.39
Hayward, J. W.	Dec. 48	7	6.19
Hedgepath, J.	April 50	25	9.10
Heen, E.	May 49	19	3.2
Heerdt, M. Jr.	Jan. 48	7	3.2
	May 50	23	3.2
Heidebrecht, O. B.	Feb. 50	13	6.19
Heimann, A. W.	April 49	23	4.21
Heimer, C. B.	Nov. 49	1	5.12
Heinle, R. W.	Oct. 48	1	6.19
Heller, A. F.	April 50	21	9.15
Heller, V. G.	Dec. 48	9	5.12
Hellier, E. G.	Dec. 49	19	6.134
Hemmingsen, P.	May 50	7	3.23
Hendel, C. E.	Nov. 50	7	3.64
Henderson, L. M.	July 48	9	7.520
Hendlin, D.	Oct. 49	3	7.64
	Sept. 50	5	5.41
Hendrickson, H. M.	Aug. 50	19	2.114
Hendrickson, M. J.	June 48	11	4.21
	June 49	3	4.21
Hening, J. C.	Oct. 49	9	7.80
Henniker, J. C.	Mar. 50	25	7.44
Herrisset, Armand	April 49	23	4.6

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Herraiz, M. L.	Feb. 49	31	8.66
Hess, P. S.	Dec. 49	11	4.3
Heuser, G. F.	May 48	3	6.19
	April 48	7	6.19
	Feb. 49	25	0.7
	Mar. 49	17	6.19
Heywang, B. W.	Nov. 50	13	6.195
Hickman, K. D. C.	Feb. 50	21	0.117
	May 50	1	0.8
Hicks, E. W.	Feb. 49	15	2.114
Higashi, H.	June 49	23	5.11
	Sept. 49	23	4.15
	Oct. 49	23	8.53
Hilby, M.	Feb. 48	5	3.26
Hildebrand, H. A.	Sept. 50	3	2.12
Hildebrand, H. H.	July 50	15	2.12
Hilditch, T. P.	April 48	3	4.11
	May 48	13	4.14
	July 48	15	4.13
	Jan. 49	11	4.14
	April 50	25	4.14
Hile, R.	Aug. 49	13	9.12
Hill, D. C.	Sept. 50	19	5.41
Hill, F. W.	Nov. 48	3	6.19
Hillig, F.	Dec. 50	1	7.82
	Dec. 50	9	7.82
	Dec. 50	17	8.8
Hino, M.	Feb. 49	31	1.86
Hirayama, T.	Aug. 49	23	6.9
Hirsch, M.	Sept. 49	23	3.63
Hirschbeck, V. E.	Feb. 50	23	3.231
Hiyama, Y.	Jan. 50	5	2.9
Hobbs, N. L.	June 49	23	7.64
Hoefer, J. A.	Mar. 50	1	6.15
	May 50	13	6.19
Hoffman, C. E.	Mar. 50	23	5.41
	May 50	1	7.641
Hogan, A. G.	Feb. 50	7	5.41
Holder, R. C.	Jan. 49	3	6.19
	May 50	19	6.19
Holland, G. A.	July 50	11	8.6177
Holman, R. T.	July 50	5	5.112
	July 49	21	4.21
Holmes, D.	April 50	7	1.85
	July 50	5	1.85
Homans, R. E. S.	July 50	9	3.8
Hool, A. E.	Sept. 49	21	1.012
	Dec. 49	23	1.012
Hopkinson, L. T.	Feb. 49	9	3.230
Hopper, H. H.	Mar. 50	1	5.41
Houston, J.	Oct. 49	13	6.19
Howard, G. E.	May 50	17	0.12
Howard, H.	Feb. 50	11	1.70
Hoyle, E. R.	Oct. 50	21	7.81
Hsu, P.	Nov. 48	7	6.19
	May 50	21	0.33
Hucker, G. J.	May 48	5	3.18
Huff, J. W.	April 49	5	7.64

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Huff, J. W.	April 49	7	7.64
	Aug. 50	21	7.641
Hughes, J. S.	Dec. 48	15	5.12
	Nov. 50	17	7.6132
Hulse, J. B.	Jan. 48	5	3.26
	Mar. 48	5	3.26
Hunter, J. E.	Jan. 49	11	6.19
Hurley, S. P.	July 49	3	3.18
	May 50	1	3.18
Huston, T. M.	Oct. 48	9	6.19
	Dec. 48	9	6.19
Hutchings, B. L.	Feb. 48	15	3.18
_____	Mar. 50	23	5.41
_____	May 50	1	7.641
Hvatum, A. R.	Jan. 50	33	1.86
Hyde, K. A.	Sept. 48	15	8.42
Idyll, C. P.	July 50	17	1.85
Iles, W. G.	Oct. 49	23	7.43, 7.2
Ingle, R. M.	Sept. 49	3	7.72
Ingram, M.	April 48	9	1.9
Iseki, S.	Oct. 49	23	8.53
Ishihara, Y.	Aug. 49	23	6.9
Ivey, J. E.	Nov. 50	3	5.41
Jackson, A. H.	Jan. 50	29	4.21
Jackson, J. M.	April 49	3	3.33
Jackson, R.	Nov. 48	17	1.0111
_____	Feb. 49	23	1.0111
_____	Mar. 49	13	1.0111
_____	April 49	5	1.0111
Jacobs, B.	Jan. 48	17	6.19
Jacobs, M. B.	July 48	19	6.237
	Aug. 48	9	6.237
Jakobsen, F.	April 48	17	3.338
Jannaway, S. P.	July 49	21	6.3
Jarowski, C. I.	Aug. 49	21	4.6
Jarvis, N. D.	Feb. 48	25	2.0
	June 48	7	3.39
_____	June 49	7	3.338
Jayaraman, R.	July 48	31	8.6177
Jensen, L. B.	Aug. 48	25	2.01
Jensen, P.	May 49	23	4.6
John, H. J.	Sept. 48	5	7.2
Johnson, A. S.	Oct. 49	11	7.43
Johnson, B. C.	Sept. 49	13	5.4
Johnson, E. L.	Aug. 48	5	5.12
Johnson, H. D.	April 48	7	3.338
Johnson, S. W.	Oct. 50	9	2.114
Johnson, W. J. B.	April 49	11	2.118
Jones, G. I.	Mar. 48	1	6.9
_____	Mar. 48	13	7.611
	Nov. 50	15	7.6133
Jones, K. K.	May 50	21	7.53
Jouanneteau, J.	Aug. 49	21	5.11
Jukes, T. H.	Oct. 48	1	6.19
_____	Sept. 49	1	5.4
_____	Dec. 49	7	5.41

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Jukes, T. H.	Mar. 50	17	5.41
_____	Mar. 50	23	5.41
_____	May 50	1	7.641
_____	July 50	15	5.41
_____	Aug. 50	3	5.41
Jul, M.	Mar. 48	19	1.014
_____	April 49	5	3.30
_____	April 49	13	7.89
_____	May 49	23	4.6
_____	June 50	1	9.6
Kaczka, E.	Aug. 49	1	5.4
	Sept. 49	23	7.64
Kahn, R. A.	Aug. 48	27	9.4
_____	May 49	11	9.2
_____	Sept. 49	19	2.6
	Feb. 50	23	9.2
Kaplan, D.	June 48	1	7.6132
_____	May 50	23	9.3
Karnofsky, G.	Jan. 50	13	4.3
	Feb. 50	5	6.2334
Karnovsky, M. L.	May 48	17	5.11
_____	Sept. 48	19	4.15
_____	Feb. 49	17	4.15
Karpov, P. P.	Mar. 48	3	8.51
_____	Mar. 48	13	8.51
Karrer, P.	Jan. 50	15	5.0
Karrick, N. L.	Mar. 48	7	6.9
_____	Mar. 48	23	6.19
_____	June 49	1	9.14
_____	Sept. 50	17	7.53
Kask, J. L.	April 48	19	1.015
_____	Sept. 48	15	1.01
	June 49	19	1.01
Kauffman, D. E.	Sept. 50	21	1.79
Kaylor, J. D.	Jan. 50	23	3.18
	July 50	3	3.18
Kefford, J. F.	Oct. 49	19	6.15
Kelby, H. G.	June 49	13	4.7
Keller, W. L.	Feb. 49	7	3.231
	Nov. 50	13	3.231
Kelley, E. G.	Nov. 48	9	7.6139
Kellogg, W. L.	Mar. 48	25	6.19
Kemmerer, A. R.	Sept. 50	9	5.121
Kennard, D. C.	Jan. 49	15	6.19
	Oct. 49	11	6.19
Kenyon, K. W.	Sept. 49	15	8.6179
Kern, C. J.	Mar. 50	9	4.6
	June 50	19	5.112
Kerr, R. G.	April 48	11	3.249
	Dec. 49	13	2.8
Ketchen, K. S.	Feb. 48	9	2.14
Keuzenkamp, A.	Dec. 49	3	4.29
Kharkof, J.	Mar. 48	15	1.9
Kidd, F.	Jan. 50	1	1.95
_____	Jan. 50	7	9.4
_____	Aug. 50	1	2.19
_____	Aug. 50	7	3.4

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Kidd, F.	Aug. 50	11	4.21
Kiermeier, F.	Oct. 49	7	3.239
Kikuchi, S.	Feb. 49	31	8.51
King, C. G.	May 49	7	0.7
	Sept. 49	9	0.7
King, J. E.	June 49	13	2.12
King, R. H.	May 50	11	5.41
Kini, U. S.	July 48	31	8.6177
Kinn, T. P.	May 49	17	0.6
Kiralis, E. S.	July 48	21	2.9
Kirk, E.	Dec. 48	11	4.90
Kistler, P. T.	May 49	17	6.19
Kitano, E.	May 49	23	7.84
Klein, R. T. Jr.	Aug. 50	21	1.0148
Klumov, S. K.	April 48	9	2.14
Knake, B. O.	Oct. 50	11	2.14
	Nov. 50	5	2.1126
Knight, H. B.	Sept. 48	3	4.5
	Oct. 49	23	7.872
Koch, W.	June 48	1	7.6132
Kochn, R. C.	Aug. 49	3	7.6132
Koditschek, L. K.	Oct. 49	3	7.64
Kokoski, F. J.	Feb. 48	9	7.51
Kolb, J. J.	June 49	1	7.53
Kon, S. K.	April 50	23	5.11
	May 50	21	5.1
Kondo, K.	Oct. 48	23	8.5
Kondrup, M.	Mar. 49	23	7.89
	May 49	23	8.3
Konen, J. C.	June 48	11	4.21
Koniuszy, F. R.	Mar. 49	5	5.4
	Aug. 49	1	5.4
Konokotin, G.	Mar. 50	11	2.19
Kopacki, A. F.	Dec. 49	11	4.3
Kornberg, H. A.	May 48	15	7.63
Kosaki, T.	June 49	13	8.59
Kraekel, L. A.	Jan. 48	19	4.6
Kramer, B.	May 48	9	5.12
Krason, W. S.	Feb. 50	23	1.014
Krause, R. F.	June 50	21	5.11
Kraybill, H. F.	June 48	5	6.139
	June 48	17	6.19
Kraybill, H. R.	Mar. 50	1	4.6
Krehl, W. A.	Aug. 48	17	5.12
Kreutzer, C.	May 50	3	2.14
Krider, J. L.	Aug. 48	7	6.19
	Feb. 50	7	6.19
	May 50	15	6.19
Kringstad, H.	Sept. 48	21	8.615
	Jan. 50	21	3.39
Kulberg, L.	April 48	15	7.879
Kummerow, F. A.	Jan. 50	29	4.21
Kunin, R.	May 50	1	0.8
Kunisaki, T.	July 48	31	4.15
Kuronuma, K.	Aug. 48	3	1.1
Lahey, R. W.	Sept. 48	9	2.43
Laing, H. V.	April 49	7	1.0111
Lambert, R. S.	Feb. 49	11	4.12
Lamden, M. P.	Dec. 50	21	0.115
Lampman, C. E.	Oct. 48	9	6.19
	Oct. 48	19	6.19
	Dec. 50	17	5.41
	Sept. 50	5	5.121
Lane, C. E.	May 48	15	7.63
Langdon, R. S.	Aug. 49	11	0.6
Langwill, K. E.	Mar. 48	25	6.19
Lanham, W. B. Jr.	April 48	11	3.249
Lantz, A. W.	Jan. 48	15	1.2
	June 48	17	3.33
	May 49	9	2.3
	May 49	13	2.3
	May 49	17	3.26
	Dec. 49	1	2.3
	June 50	3	3.33
	June 50	9	6.10
	June 50	13	3.4
	Aug. 50	17	2.3
	Dec. 50	7	3.231
Larsen, R. L.	Oct. 48	19	6.19
Lassen, S.	Aug. 49	11	6.19
	Nov. 49	13	4.90
Lategan, A. W.	Feb. 49	17	4.15
Lauffer, P. G.	Oct. 49	19	7.80
Lavers, C. G.	July 48	7	2.43
Law, D. K.	Jan. 49	13	8.6170
Lawas, I. L.	Feb. 50	15	0.117
Lea, C. H.	Dec. 49	7	4.99
	Aug. 50	7	0.33
Lea, D. E.	Dec. 49	11	3.19
Lee, C. E.	July 48	1	6.10
	July 49	15	6.19
Lee, C. F.	June 48	7	3.39
	Aug. 48	5	6.19
	Aug. 48	21	8.7
	Sept. 48	9	5.2
	Sept. 48	17	5.2
	Oct. 48	13	6.9
	Dec. 48	5	9.2
Lee, S. W.	July 48	5	5.11
	July 48	21	5.11
Lees, K. A.	April 50	23	7.641
Legendre, R.	Aug. 50	9	3.5
Legroux, R.	Nov. 48	23	2.9
Lemon, J. M.	May 48	15	3.238
	June 48	15	3.230
	Mar. 49	15	2.3
Lepley, K. C.	Feb. 50	13	5.41
	Nov. 50	9	5.41
Leskov, G. D.	Aug. 49	23	7.89
Lesser, M. A.	Mar. 48	17	6.3
	Oct. 49	9	5.4
	Mar. 50	3	5.12
	May 50	17	5.1
	Oct. 50	3	4.89
Letson, S. W.	Aug. 49	9	6.10
	Dec. 49	3	6.1
Leva, M.	May 50	1	0.8

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Levaditi, J.	Nov. 48	23	2.9
Lewis, H.	Jan. 48	5	3.23
———	July 48	19	3.23
———	July 50	5	1.85
———	Nov. 50	17	2.01
Lewis, V. J.	May 50	3	8.64
Lewis, W. R.	May 49	1	4.21
Li, J. C. R.	May 49	19	7.89
Lichtblau, J.	May 48	9	5.12
Lillie, R. J.	Nov. 48	1	6.19
———	Mar. 49	3	5.4
———	Nov. 49	5	5.41
Lin, S. Y.	May 50	23	9.16
Lindner, M. J.	Feb. 49	21	1.012
———	May 50	23	9.3
Lindsay, R. A.	May 50	1	0.8
Lindstrom, R. G.	Sept. 49	19	5.4
———	Nov. 49	13	5.4
Line, D.	Sept. 49	23	7.43
Linton, E. P.	Oct. 50	19	3.4
Lips, H. J.	Feb. 50	7	4.6
———	Oct. 50	13	5.112
Livermore, A. H.	July 49	7	5.2
Lobel, J.	Aug. 49	17	3.18
Lockwood, E. W.	Sept. 49	7	1.013
Lontie, A.	April 49	23	7.611
Loosli, J. K.	Sept. 48	3	5.12
Lopez-Matas, A.	Feb. 49	17	8.7
Lord, D.	Nov. 48	17	1.85
Loury, M.	June 48	7	7.43
Lovern, J. A.	July 48	13	1.011
———	Aug. 48	17	1.011
———	Sept. 48	11	3.3
———	Oct. 48	1	1.011
———	Nov. 48	1	6.230
———	Sept. 50	15	4.10
Lovett, R. A.	April 49	9	3.64
Lowe, B.	Nov. 50	19	7.80
Lowe, E.	Aug. 50	11	3.231
Lowry, O. H.	May 50	23	7.67
Lucas, C. R.	Oct. 48	5	2.6
———	Aug. 50	1	2.6
———	Aug. 50	5	2.6
Luecke, R. W.	Nov. 49	9	5.4
Luet, B. J.	Feb. 49	15	3.239
Lundberg, W. O.	Mar. 48	7	4.6
———	Mar. 48	27	4.6
———	June 49	3	4.21
Lyman, C. M.	Sept. 50	9	5.41
MacCallum, W. A.	Jan. 50	15	2.19
———	Sept. 50	17	2.40
———	Sept. 49	11	2.5
MacDonald, N. S.	July 48	5	5.11
Mac Dougall, D.	July 48	11	6.3
MacKay, K.	Nov. 49	7	7.872
Mackintosh, D. L.	Sept. 49	1	4.21
MaClay, W. D.	Dec. 48	17	3.238
MacLean, M.	Dec. 50	9	7.82
———	Dec. 50	17	8.8

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MacMillan, D.	Mar. 50	15	4.2
Macpherson, M. G.	Jan. 50	31	8.4
MacVicar, R.	Dec. 48	5	6.19
———	Oct. 49	13	6.19
———	Feb. 50	13	6.19
Maddison, L.	Jan. 49	11	4.14
Madison, P.	Oct. 48	13	1.1
———	Nov. 48	9	1.1
———	Dec. 48	3	1.95
———	Jan. 49	9	1.1
Madsen, L. L.	Mar. 48	5	5.12
Magnusson, M. Jr.	Sept. 50	17	9.3
Mahadevan, V.	June 50	13	3.239
———	Mar. 49	1	6.132
Maiese, M. R.	Mar. 50	9	4.6
Major, F.	May 50	11	1.013
Major, R.	April 48	13	4.6
Makarova, T.	Mar. 48	15	7.461
Malin, R. B.	May 50	5	8.51
Maloney, J. O.	May 50	1	0.8
Malowan, L. S.	Feb. 49	29	4.15
Manale, A. D.	Aug. 49	15	6.234
Mann, F. C.	Oct. 48	13	1.86
Mansour-Bek, J. J.	July 49	23	1.82
Mantell, C. L.	Aug. 49	23	6.3
Marboe, E. C.	Oct. 49	15	0.2
March, B.	June 49	9	6.249
———	Jan. 50	7	6.19
Marrero, A.	June 48	9	8.610
Marron, M. I.	Feb. 50	23	3.231
Marsden, S. J.	Mar. 48	25	6.19
———	Nov. 48	1	6.19
———	Nov. 49	5	5.41
Marsh, B. B.	Nov. 50	21	0.115
Marshak, J.	Mar. 48	15	7.461
Marshall, A. E.	Mar. 50	21	3.33
Marshall, S. M.	May 50	23	6.3
Marshall, S. P.	Jan. 49	21	6.19
Martinek, W. A.	Jan. 48	17	6.19
Martinez, J. L.	July 48	27	1.87
Maslow, H. L.	Nov. 49	1	5.12
Massonet, R.	Aug. 49	9	8.612
Masuda, S.	Oct. 49	23	8.53
Mathew, P. K.	July 49	21	6.135
———	Nov. 49	23	6.237
Mathiesen, E.	April 48	17	3.338
Mattill, H. A.	July 49	19	5.12
Mayer, J.	Aug. 48	17	5.12
Maynard, L. A.	April 48	7	6.19
McBride, G. W.	May 50	9	6.138
McClain, H. K.	Dec. 48	11	4.10
McCaughey, M. B.	July 48	11	2.9
McCleskey, C. S.	Jan. 50	7	2.01
———	April 50	7	1.85
McClure, F. J.	July 50	5	8.42
McConnell, J.	Sept. 49	17	3.338
McCormack, R. B.	Sept. 49	7	7.64
McCoy, D. C.	Nov. 50	15	3.238
McDaniel, R.	May 49	5	1.0117
———	Oct. 50	5	9.3

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McDonald, F. G.	Dec. 49	17	8.42
McDonnell, G. H.	Oct. 50	15	3.338
McFarlane, W. D.	Oct. 50	13	5.112
McFee, E. P.	Sept. 49	5	6.13
McGillivray, W. A.	Sept. 50	9	7.611
McGinnis, J.	Nov. 48	7	6.19
————	Feb. 49	19	0.7
————	May 50	21	0.33
	July 50	13	5.41
McGuine, T. H.	Aug. 50	21	0.112
McKee, L. G.	May 48	17	7.61
	Nov. 50	15	7.6133
McKenzie, H. A.	Jan. 48	11	3.338
McKenzie, R. A.	Sept. 50	23	2.119
McLaren, B. A.	July 48	17	9.14
McMillen, W. N.	Nov. 49	9	5.4
McMynn, R. G.	June 50	11	1.86
McRary, W. L.	Jan. 49	17	8.6177
Mead, T. H.	Sept. 50	25	2.19
————	Nov. 50	7	2.00
Meadows, G. B.	Aug. 50	19	5.41
Medcof, J. C.	Sept. 49	21	1.89
Mehl, J. W.	Feb. 49	7	5.12
Mahlenbacher, V. C.	Feb. 48	23	7.872
Melnick, D.	May 49	11	0.32
Merat, P.	Nov. 49	21	4.89
Mercado, R.	May 50	1	0.113
Merrill, D. G.	Mar. 49	19	3.338
Meunier, P.	Aug. 49	21	5.11
Michener, C. K.	Mar. 50	7	6.9
Michener, H. D.	Aug. 50	1	3.12
Mickelsen, O.	May 50	9	7.2
Milas, N. A.	July 48	5	5.11
————	July 48	13	5.11
————	July 48	21	5.11
Miles, M. C.	July 49	19	5.12
Miller, R. F.	May 50	23	5.41
Miller, S. A.	May 50	1	0.8
Mills, V.	Dec. 48	11	4.10
Miloradovich, M.	Aug. 49	21	2.8
Minor, L. J.	April 48	3	0.32
Mishler, D. H.	Aug. 48	7	6.19
————	Nov. 48	13	6.19
————	April 49	17	6.19
Mitchell, H. L.	June 48	19	5.12
Mitchell, T.	Feb. 49	25	1.85
Miyauchi, D. T.	Jan. 48	1	7.611
————	Mar. 48	25	6.133
————	April 48	1	7.61
————	July 49	17	8.6170
————	Nov. 50	15	7.6133
Mohammad, A.	April 50	21	0.33
Mold, J. D.	July 48	11	2.9
————	July 48	21	2.9
————	May 49	5	8.59
Moller, O.	April 49	5	3.30
	April 49	13	7.89
Moncrieff, R. W.	Dec. 48	19	0.6
Moncrieff, R. W.	Oct. 49	3	7.80
Monnier, R. P.	July 48	21	2.9
Montequi, D.	July 49	21	4.2
Montequi, R.	July 49	21	4.2
Moore, P. R.	Sept. 49	19	5.4
	Nov. 49	13	5.4
Moore, S.	June 49	17	7.52
Moore, T.	Dec. 48	3	5.12
Morgareidge, K.	July 48	13	7.61
Mori, T.	July 48	31	6.249
Morris, C. E.	Feb. 50	5	6.135
Morris, M. M.	Nov. 49	7	2.8
Morris, R. W.	May 50	21	2.14
Morris, S. G.	Jan. 48	19	4.6
	April 50	21	4.6
Morton, R. A.	Feb. 48	15	7.611
————	July 48	23	7.611
————	Nov. 48	11	8.6176
————	Dec. 48	9	5.11
————	Mar. 49	17	5.12
————	Mar. 49	19	5.12
————	April 50	25	5.11
————	Nov. 50	17	7.611
Moser, H. A.	Feb. 49	1	4.6
	Aug. 50	17	7.80
Moss, W. E.	Aug. 50	21	0.112
Muller, P. B.	July 49	23	5.11
Munkelt, F. H.	Dec. 48	13	6.135
Murphy, J. R.	Dec. 50	15	0.6
Musacchia, X. J.	Nov. 50	1	8.53
Musmanno, E.	Feb. 49	31	8.66
Myers, J. S.	Jan. 48	19	4.6
Mygind, A.	July 50	7	8.53
Nair, J. H.	Aug. 49	13	7.80
Nair, P. V.	July 49	21	6.135
	Nov. 49	23	6.237
Nanz, R. A.	Nov. 48	5	7.89
Narod, M.	Oct. 48	9	7.6132
Naubert, J.	July 48	17	2.9
Needler, A. B.	Oct. 49	17	2.9
Neilands, J. B.	Mar. 48	15	3.39
————	July 48	31	5.11
————	May 50	5	8.51
Nepple, H. M.	Aug. 50	21	7.641
Nestler, R. B.	Dec. 48	17	5.12
Neumann, A. L.	Sept. 49	13	5.4
Newcombe, C. L.	Oct. 49	21	1.86
Newton, L.	May 50	23	6.3
Ney, P. W.	Mar. 49	13	6.19
	Aug. 49	15	2.01
————	Dec. 49	9	8.64
————	Sept. 50	11	8.51
————	Nov. 50	9	8.64
Nichol, C. A.	Oct. 48	7	6.19
————	Oct. 48	17	6.19
	Aug. 49	7	5.4
Nichalas, R. E. H.	May 50	23	8.50
Nicholsen, R.	Oct. 49,	1	6.138

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Nickelsen, D.	Feb. 48	17	3.338
	July 48	23	3.338
Nickerson, J. T. R.	June 50	17	2.03
	Aug. 50	13	2.03
Niedermeier, W.	Dec. 49	17	8.42
Nielsen, B. W.	Feb. 50	17	0.113
Nielsen, K.	April 49	5	3.30
	April 49	13	7.89
	April 49	21	8.53
	May 49	21	1.79
Nier, F. M.	Nov. 50	3	3.238
	Dec. 50	19	6.10
Nikitin, B. R.	Oct. 50	11	1.0145
Nilson, H. W.	Jan. 48	17	6.19
	Feb. 48	25	2.0
	Mar. 48	25	6.19
	June 48	5	6.139
	June 48	17	6.19
	Oct. 49	19	8.6175
	Aug. 50	15	4.65
Nito, H.	Aug. 49	23	6.9
Norris, L. C.	May 48	3	6.19
	Feb. 49	25	0.7
	Mar. 49	17	6.19
	May 50	23	5.41
Notevarp, O.	May 49	19	3.2
Obold, W. L.	Feb. 48	15	3.18
O'Conner, J. A.	July 50	19	5.110
O'Doherty, K.	April 49	5	7.64
Oglesby, S. C.	Dec. 48	15	1.86
O'Grady, A.	Dec. 49	25	2.112
O'Hare, G. A.	Dec. 49	11	4.3
Ohye, D. F.	Jan. 48	17	3.12
Olcese, O.	Sept. 50	9	5.41
Olcott, H. S.	April 50	21	0.33
Oliver, A. P.	Mar. 49	19	4.15
Orr, A. P.	May 50	23	6.3
Oser, B. L.	May 49	11	0.32
	June 49	15	7.0
	Aug. 49	19	7.611
	June 50	11	7.0
	Sept. 50	15	7.610
Osterhaug, K. L.	Jan. 48	A	9.6
	Jan. 48	7	3.2
	May 50	23	3.2
	Oct. 50	17	2.8
Ott, W. H.	Feb. 49	21	6.19
Overell, B. G.	Feb. 50	19	7.61
Overman, A.	May 49	19	7.89
Owens, H. S.	Dec. 48	17	3.238
Page, A. C. Jr.	Oct. 48	1	6.19
	Dec. 49	7	5.41
Parent, R. W.	Mar. 50	3	7.61
Parham, M. A.	Feb. 48	9	7.51
Parker, L. F. J.	April 49	3	5.4
Parkes, D. W.	Oct. 50	21	7.81
Parrish, D. B.	June 48	19	5.12
Partridge, C. W. H.	April 49	23	7.64
Passino, H. J.	April 49	19	4.0
Patel, S. M.	May 48	9	7.44
Pathak, S. P.	May 48	13	4.14
	July 48	15	4.13
	April 50	25	4.14
Patterson, W. I.	Dec. 50	9	7.82
	Dec. 50	17	8.8
Patton, A. R.	Sept. 48	1	0.33
	Oct. 50	3	6.195
Paul, W. J.	April 49	5	7.64
	Sept. 50	3	5.41
Payne, L. F.	June 48	19	5.12
Pearman, R. W.	May 50	11	1.013
Pearson, A. M.	Dec. 49	11	5.41
	Dec. 49	9	5.41
	Mar. 50	1	5.41
	Aug. 50	19	5.41
Pearson, P. B.	April 48	5	6.19
Peck, L.	Feb. 49	13	6.19
	Aug. 49	11	6.19
Pederson, R. K.	April 48	17	3.4
	Oct. 48	15	2.14
Peeler, H. T.	May 50	23	5.41
Peglow, H.	May 50	3	2.14
Pells, F.	Mar. 50	9	5.9
Pensack, J. M.	Oct. 49	11	6.19
Pentzer, W. T.	May 50	15	3.26
Percival, E. G. V.	Oct. 48	3	7.599
	April 49	11	7.598
Peret, H.	Dec. 49	19	7.80
Perry, E. S.	Feb. 50	21	0.117
Perthel, R. Jr.	Dec. 50	3	7.44
Pertuit, C. J.	Jan. 50	33	1.86
Petersen, C. F.	Oct. 48	9	6.19
	Oct. 48	19	6.19
	Sept. 49	19	5.4
	Nov. 49	13	5.4
	Dec. 50	17	5.41
Petersen, Halvar	May 49	5	3.7
Peterson, G. T.	Oct. 50	3	3.33
Petrich, J. F.	Aug. 50	21	2.115
Petrov, K. P.	Mar. 48	13	4.5
Phillips, A. M. Jr.	Nov. 48	15	9.16
	Aug. 49	15	4.82
	Feb. 50	25	5.4
Phillips, E. H.	Dec. 48	23	7.611
Phillips, W. M.	Oct. 49	1	7.777
Pierce, J.	Oct. 48	1	6.19
	Dec. 49	7	5.41
Pigford, R. L.	May 50	1	0.8
Pike, G. C.	Jan. 50	29	1.95
	June 50	3	1.95
Piquard, J.	June 48	7	7.43
Piskur, F. T.	Jan. 48	1	7.89
Piskur, M. M.	Feb. 50	21	4.0
Pivnick, H.	April 49	15	7.85
Plank, R. P.	Oct. 48	15	7.80
Planta, C.	Jan. 48	15	1.011
Plati, J. T.	July 48	13	5.11
	July 48	21	5.11

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Platt, E.	May 48	21	2.8
Plummer, H. C.	Sept. 50	7	2.115
Popper, H.	Jan. 49	13	5.12
	July 50	21	5.12
Porter, J. V.	July 49	9	4.29
Post, O.	July 49	17	7.2
Pottinger, S. R.	Mar. 48	19	3.24
	April 48	11	3.249
	June 48	15	2.1
	Oct. 48	11	3.23
	Feb. 49	23	8.3
	Mar. 49	15	2.3
	Aug. 49	21	3.238
Potts, R. H.	May 50	9	6.138
Potts, T.	Feb. 48	9	7.51
Powell, D. E.	July 50	15	2.12
	Sept. 50	3	2.12
	Nov. 50	1	1.0116
Power, E. A.	May 49	11	9.2
	Feb. 50	23	9.2
	Sept. 50	1	6.230
Powers, M. J.	May 48	9	3.33
	Sept. 49	17	3.338
Powers, P.	April 49	19	4.0
Prebluda, H. J.	Jan. 49	7	6.19
	Sept. 49	17	6.19
Pressler, C. E.	May 48	19	7.80
Primm, E.	Nov. 48	7	7.6132
Proctor, B. E.	July 48	3	2.8
	June 50	17	2.03
	Aug. 50	13	2.03
	Nov. 50	1	3.19
Pugsley, L. I.	Dec. 50	3	8.42
Puncochar, J. F.	June 48	15	2.1
	Dec. 48	3	4.6
	Sept. 49	1	3.23
Quackenbush, F. W.	Jan. 49	13	6.19
	May 49	1	4.21
Quaife, M. L.	Mar. 49	11	7.67
	May 50	23	7.67
	June 50	1	8.69
Rabinowitz, J. C.	Mar. 49	1	8.64
Radcliffe, L.	Sept. 49	21	1.81
Radomski, J. L.	Oct. 49	1	4.6
Ragan, M. S.	June 49	11	0.7
Ramakrishnan, T. A.	July 49	21	6.135
	Nov. 49	23	6.237
Ramsbottom, J. M.	April 50	13	3.234
Ramspeck, R.	Aug. 49	19	2.5
	Jan. 50	3	2.5
Rao, S. D.	Feb. 48	31	5.11
Rappaport, S.	April 50	25	2.43
Rapson, W. S.	May 48	17	5.11
	Sept. 48	19	4.15
	Feb. 49	17	4.15
Rasmussen, E. H.	Dec. 50	19	7.80
Ravel, J. M.	Mar. 49	7	5.4
Raynolds, J. A.	Sept. 50	15	7.610
Reay, G. A.	Feb. 48	13	3.63
	May 49	3	2.0
	Nov. 49	7	2.40
	Nov. 49	11	3.249
	Jan. 50	1	1.014
	April 50	23	2.19
Reed, G. B.	Aug. 49	17	9.4
Reed, J. M.	Sept. 49	17	3.338
	May 48	5	3.33
	May 48	9	3.33
	May 48	11	3.33
Rees, H. G.	Mar. 50	21	7.64
Register, V. D.	May 50	3	8.64
Reiser, R.	June 49	1	4.5
Reneau, A. L.	Feb. 50	1	3.26
Reynolds, J. B.	June 48	19	5.12
Rezabek, H.	Mar. 50	1	4.6
Rice, E. E.	Nov. 48	7	7.6132
	Sept. 50	15	7.610
Rich, R.	Nov. 49	9	3.18
Richards, J. F.	June 49	7	2.01
Richardson, A. C.	Sept. 50	15	7.610
Richardson, E. L.	Jan. 48	15	6.130
Richardson, L. R.	Aug. 50	5	5.41
Rickes, E. L.	Feb. 49	21	6.19
	Mar. 49	5	5.4
	Aug. 49	1	5.4
Riddell, N. A.	Mar. 49	7	9.14
Ridyard, H. N.	June 49	19	7.2
Riegel, B.	July 48	11	2.9
	July 48	21	2.9
	May 49	5	8.59
Riemann, H.	April 49	5	3.30
	April 49	13	7.89
	June 49	17	3.4
Riemenschneider, R. W.	Jan. 48	19	4.6
	April 50	21	4.6
Riley, J. A.	June 49	15	0.113
Rivers, J. T.	July 48	13	5.11
Roach, S. W.	May 49	9	3.33
	Dec. 49	1	7.80
	Dec. 49	13	3.33
	June 50	11	3.4
	Dec. 50	7	3.33
Robas, J. S.	Nov. 49	5	1.013
Robblee, A. R.	Oct. 48	7	6.19
	Oct. 48	17	6.19
Robertson, E. J.	Dec. 50	3	3.230
Robeson, C. D.	Nov. 50	19	5.11
Robinson, F. A.	May 49	1	5.9
	July 49	19	5.4
Rockwood, B. N.	Feb. 48	23	7.872
Rodahl, K.	Mar. 50	11	8.6179
Rodgers, E. O.	Feb. 50	25	5.4
Roedel, P. M.	Feb. 49	11	1.0114
Roessler, E. B.	June 49	19	7.80
Rogers, E. O.	Aug. 49	15	4.82
Rocke, E. A.	Nov. 48	13	3.26

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Rose, D. H.	April 48	7	3.338
Rose, R. C.	Mar. 50	23	6.3
Rosner, L.	April 50	17	7.611
Ross, A. G.	Oct. 48	3	7.599
Ross, D. S.	May 49	15	1.1
Ross, L. R.	Sept. 48	5	7.2
Ross, O. B.	Feb. 50	13	6.19
Roth, C. B.	April 48	3	5.12
Roth, Eva	April 49	21	8.0
Rowan, A. N.	Dec. 49	15	2.02
Royce, W. F.	Aug. 48	19	2.117
Rubin, M.	April 48	5	6.19
Ruger, M. L.	Sept. 50	5	5.41
Rushton, J. H.	May 50	1	0.8
Russel, J.	Aug. 48	23	8.53
Russel, W. C.	July 49	3	5.4
Russell, R.	July 48	25	2.6
_____	May 50	7	9.2
_____	Aug. 50	1	9.2
_____	Nov. 50	1	9.2
Sachs, E.	Oct. 48	19	6.19
Sair, L.	Aug. 49	23	6.134
Saitoo, H.	Feb. 49	31	1.86
Sakal, E.	July 48	5	5.11
	July 48	13	5.11
Salter, L. C.	Aug. 48	27	9.4
Salton, M. R. J.	Jan. 48	17	3.12
	Feb. 49	21	3.18
Sandberg, A. M.	Sept. 49	21	1.01
	Jan. 50	33	1.01
Sanders, R. K.	July 49	1	3.338
Sandholzer, L. A.	Jan. 48	1	2.05
	Nov. 49	23	6.3
Sanford, F. B.	Jan. 48	1	7.611
_____	April 48	1	8.6177
_____	April 48	1	7.61
_____	May 48	17	7.61
_____	July 49	17	8.6170
_____	Aug. 49	15	6.234
_____	Sept. 49	15	8.6179
_____	Oct. 49	19	8.6175
_____	Nov. 49	3	1.71, 1.72
_____	Jan. 50	9	5.11
_____	June 50	23	6.1
_____	July 50	11	8.6177
_____	July 50	15	1.79
_____	Aug. 50	7	6.0
_____	Aug. 50	21	6.0
_____	Sept. 50	17	7.53
_____	Nov. 50	15	7.6133
Sanford, T. D.	Sept. 50	15	7.610
Satodate, K.	Dec. 49	25	8.4
Savage, J. P.	May 49	9	7.613
Scanlan, J. T.	Sept. 48	3	4.5
Scarborough, D. A.	Aug. 49	11	4.5
Scattergood, L. W.	Feb. 50	5	1.89
	May 50	23	1.89
Schaefer, A. E.	Feb. 50	23	5.4
Schaefer, H. C.	Sept. 50	15	7.610
_____	Dec. 50	23	7.613

Author	Date	Page	Subj. Code
Schafer, I. M.	Feb. 48	9	7.51
Schain, P.	Oct. 49	7	7.53
Scheffer, V. B.	Sept. 49	15	8.6179
Schenck, H. G.	Jan. 49	5	1.015
Schmidt, P. J.	Oct. 48	11	8.0
	Dec. 50	3	8.6179
Schuerch, C. Jr.	July 48	21	5.11
Schultz, V.	Dec. 48	7	5.12
Schwab, A. W.	Feb. 49	1	4.6
Schwartz, H. M.	Sept. 48	19	4.15
_____	Feb. 49	17	4.15
_____	Aug. 50	21	7.44
_____	Nov. 50	9	8.53
Schwartz, M. C.	Dec. 49	17	8.42
Schweigert, B. S.	April 48	5	6.19
_____	May 48	1	6.19
_____	Nov. 49	9	5.4
_____	Jan. 50	27	5.41
Scofield, W. L.	April 50	15	2.114
Scott, G. C.	June 49	19	9.2
Scott, M. L.	June 48	11	6.19
_____	Feb. 49	25	0.7
_____	Mar. 49	17	6.19
Scrimshaw, N. S.	May 50	23	7.67
Sealock, R. R.	July 49	5	5.2
	July 49	7	5.2
Seaman, J.	Feb. 50	11	4.81
Seibert, H. W.	Aug. 48	13	6.3
Sellers, K. C.	Nov. 48	11	5.12
Serbinovskaya, E. L.	Mar. 48	3	7.461
Severn, M.	July 49	11	1.89
Sevigne, F. J.	Mar. 50	19	5.12
	Sept. 50	5	5.125
Shaffner, C. S.	Dec. 50	19	5.41
Shand, W. C.	Nov. 49	13	7.53
Shantz, E. M.	Jan. 49	1	5.11
	Sept. 50	7	5.111
Shapiro, O. I.	Mar. 48	3	8.51
Shapiro, S.	Aug. 48	3	1.1
_____	July 49	17	1.015
_____	Sept. 50	3	1.015
Sharman, C. F.	Oct. 49	23	7.43
Sharp, J. G.	Dec. 49	3	0.32
Shaw, G. E.	Mar. 50	11	7.641
Shealy, A. L.	Dec. 49	9	5.41
	Dec. 49	11	5.41
Sheard, K.	Oct. 50	23	1.017
Shearer, P. S.	Mar. 48	17	6.19
Shearon, Will H.	May 49	3	5.0
Sheffer, H.	Sept. 49	23	7.43
Sherman, H. C.	June 49	11	0.7
_____	Oct. 49	21	5.12
_____	Nov. 49	9	0.7
Sherman, M.	May 48	9	5.12
Sherr, H.	May 49	11	9.2
	Feb. 50	23	9.2
Sherwood, R. M.	April 48	5	6.19
Shewan, J. M.	Feb. 49	7	3.5
_____	April 49	3	7.45
_____	Nov. 49	1	3.4
_____	Nov. 49	7	2.40
_____	Jan. 50	1	2.01

Author	Date	Page	Subj. Code
Shewan, J. M.	April 50	23	2.19
Shinano, S.	Oct. 48	23	8.5
Shires, L. B.	Feb. 50	3	7.595
Shive, W.	Mar. 49	7	5.4
Shorland, F. B.	Aug. 48	23	8.53
	Mar. 49	19	4.15
Shrivastava, R. K.	April 48	3	4.11
Siam, P.	Sept. 49	3	2.112
Sidaway, E. P.	June 48	5	3.33
	Nov. 48	7	3.30
Siemers, G. F.	July 48	3	4.6
Sigurdsson, G. J.	Feb. 48	27	7.80
	Nov. 50	19	3.5
Silker, R. E.	May 49	15	7.597
Silverstein, R. M.	Dec. 50	3	7.44
Simone, R. M.	May 48	21	4.6
Simonson, H. D.	June 50	21	0.6
Sinnhuber, R. O.	Jan. 49	13	8.6170
Sirny, R. J.	May 50	5	8.51
Siu, R. G. H.	Mar. 48	9	2.111
Sjostrom, L. B.	Sept. 48	7	2.8
	Mar. 49	15	7.89
	Dec. 50	13	3.238
Skaife, S. H.	Oct. 48	7	1.016
Skaperdas, G. T.	May 50	1	0.8
Skeggs, H. R.	April 49	7	7.64
	Aug. 50	21	7.641
Skellon, J. H.	June 48	13	7.872
Slates, H. L.	Jan. 50	31	5.11
Smith, E. C. B.	Dec. 49	3	0.32
	Dec. 49	15	0.32
Smith, E. G.	July 48	3	4.6
Smith, E. L.	April 49	3	5.4
	April 50	11	7.641
Smith, F.	Feb. 50	13	9.7
Smith, F. G. W.	Aug. 49	9	1.89
Smith, G. S.	Aug. 50	11	3.231
Smith, H. L. Jr.	April 50	3	0.6
Smith, J.	Feb. 50	25	3.29
	Dec. 50	1	6.13
Smith, J. B.	June 50	21	7.611
Smith, R. O.	May 48	13	1.015
	Aug. 48	11	2.14
	Aug. 48	23	2.14
Smith, R. R.	Aug. 48	3	3.238
Smock, R. M.	May 48	1	3.249
Snell, E. E.	July 48	9	7.520
	Mar. 49	1	8.64
Snell, F. D.	Oct. 49	11	3.18
Snow, A.	Nov. 50	21	0.115
Snow, J. M.	June 50	5	3.239
	Mar. 50	25	2.00
	Nov. 50	15	2.01
Snow, S.	May 48	9	5.12
Snow, S. D.	Mar. 48	5	7.6131
Sobel, A.	Mar. 48	5	7.6131
Sobel, A. E.	May 48	9	5.12
	Nov. 49	1	5.12

Author	Date	Page	Subj. Code
Sober, H. A.	July 49	15	8.51
Sobetaka, H.	Mar. 49	5	5.11
Sohljell, I.	May 50	5	8.51
Solomides, J.	Aug. 48	5	4.89
Somers, I. I.	April 48	13	3.18
	Sept. 49	17	3.338
	June 49	5	3.18
Sommer, H.	July 48	11	2.9
	July 48	21	2.9
	May 49	5	8.59
Sotola, J.	Oct. 48	17	6.19
Southall, C. L.	April 48	15	3.63
	Oct. 49	17	6.132
	Oct. 50	11	6.132
Southcott, B. A.	Nov. 50	9	8.64
	Dec. 50	5	3.11
Spamnuth, H. T.	April 50	15	4.5
Spaugh, O. H.	Aug. 50	11	3.231
Spektor, S. E.	July 48	31	7.89
Springer, D.	June 48	17	1.015
Springer, J.	Jan. 50	15	1.012
	Feb. 50	9	1.012
Spruth, H. C.	Feb. 50	3	5.41
Sreemulanathan, H.	July 49	21	6.135
	Nov. 49	23	6.237
Sreenivasan, A.	May 48	9	7.44
Stanger, D. W.	July 48	11	2.9
	July 48	21	2.9
	May 49	5	8.59
Stansby, M. E.	Jan. 48	A	9.6
	Feb. 48	23	7.53
	June 48	1	3.239
	Nov. 48	1	7.53
	Mar. 49	9	7.53
	June 49	11	7.592
	Dec. 49	1	4.6
	Dec. 49	13	3.249
Steele, R. R. Jr.	Dec. 50	21	2.117
Steigmann, F.	July 50	21	5.12
Stein, W. H.	June 49	17	7.52
Stenerson, H.	Dec. 48	11	6.9
Stephenson, E. L.	Feb. 49	19	0.7
Stern, J. R.	July 49	3	5.4
Stern, R.	April 50	23	0.115
Sterner, J. H.	May 50	19	4.6
Stewart, G. F.	Nov. 50	19	7.80
Stiller, E. T.	Aug. 49	21	4.6
	Sept. 49	23	4.6
Stillman, R. C.	May 49	1	7.592
Stokstad, E. L. R.	Oct. 48	1	6.19
	Dec. 49	7	5.41
	Mar. 50	23	5.41
	May 50	1	7.641
	July 50	15	5.41
	Aug. 50	3	5.41
	Oct. 50	7	0.7
Stoloff, L. S.	Nov. 48	19	6.3
	Dec. 48	3	4.6

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Stoloff, L. S.	Aug. 50	21	6.3
Strandine, E. J.	April 50	13	3.234
Strohm, D. B.	June 48	19	2.43
Strong, F. M.	Mar. 48	15	3.39
	May 50	5	8.51
Stubbs, A. L.	Feb. 48	15	7.611
	July 48	23	7.611
	Nov. 50	17	7.611
Stumbo, C. R.	Dec. 50	15	0.6
Stupich, D.	Jan. 50	7	6.19
Sturges, E. B.	April 50	13	2.112
Sullivan, G. H.	July 48	21	3.238
Sunde, M. L.	June 50	9	5.41
Surzhin, S. N.	Mar. 48	3	3.4
Sutton, T. S.	Dec. 50	9	5.41
Swain, L. A.	Feb. 48	13	8.6177
	Feb. 48	19	6.249
	Mar. 49	3	5.11
	April 49	13	7.594
	Dec. 49	3	8.6179
	Dec. 49	5	4.81
	June 50	9	5.112
	Sept. 50	11	9.2
Swanson, W. J.	June 50	1	8.69
Swartz, V.	Mar. 50	1	4.6
Sweely, J. S.	April 50	9	0.110
Swern, D.	Sept. 48	3	4.5
	Oct. 49	23	7.872
Takagi, M.	Dec. 49	25	6.3
Takaoka, M.	Aug. 49	23	6.9
Takehana, T.	Dec. 49	25	8.4
Talbot, A.	Jan. 50	21	7.53
Tamura, T.	Dec. 49	25	6.3
Tarassuk, N. P.	June 50	21	0.6
Tarr, H. L. A.	Feb. 48	9	6.19
	June 48	1	3.33
	Sept. 48	13	3.17
	Oct. 48	7	6.9
	Nov. 48	5	6.9
	Mar. 49	13	6.19
	Aug. 49	15	2.01
	Dec. 49	9	8.64
	Jan. 50	9	6.9
	Jan. 50	21	4.6
	June 50	13	2.3
	July 50	13	8.59
	Sept. 50	11	8.51
	Sept. 50	13	0.33
	Nov. 50	9	8.64
	Dec. 50	5	3.11
Tatarskaya, R. I.	April 49	23	0.38
Taub, A.	May 48	21	4.6
Taylor, C. C.	May 50	23	1.89
	Feb. 50	5	1.89
Taylor, D. H.	July 48	25	3.26
	Aug. 48	11	1.85
	May 49	17	3.26
Taylor, D. H.	Aug. 49	1	2.5
	Nov. 50	7	3.64
Taylor, H. S.	Oct. 49	21	4.6
Taylor, M. W.	July 49	3	5.4
Terrill, S. W.	May 50	15	6.19
Test, R. W.	April 49	19	4.0
Tester, A. L.	Aug. 48	3	2.14
Thayer, R. H.	Dec. 48	5	6.19
	Dec. 48	9	5.12
	Oct. 49	13	6.19
Therne, E.	April 49	13	7.89
Thomas, B. H.	Jan. 50	3	5.6
Thomas, E. B.	April 48	11	2.113
Thompson, H. T.	May 50	3	8.64
	Aug. 50	21	7.641
Thompson, P.	April 48	9	3.338
Thompson, S. Y.	April 50	23	5.11
	May 50	21	5.1
Thomson, J. M.	Jan. 49	9	1.81
	Feb. 49	17	1.81
	Mar. 49	7	1.81
	April 49	9	1.81
	June 49	9	1.81
Thomson, Procter	May 49	1	7.592
Thorp, F. Jr.	Nov. 49	9	5.4
Thurman, B. H.	Feb. 50	11	6.137
Tieman, J. W.	Mar. 50	21	5.41
Tinklin, G. L.	Feb. 50	25	3.29
Tiselius, A.	June 49	15	0.3
Tishler, M.	Jan. 50	31	5.11
Titus, H. W.	May 48	19	6.19
Tobez, E. R.	May 49	23	8.0
Tollefson, T. C.	May 48	17	9.2
Tomkins, R. G.	June 49	17	7.8
Tomlinson, W. V.	Mar. 50	9	5.9
	Oct. 50	5	9.14
Tove, S. B.	Feb. 50	23	5.4
Townsend, C. T.	May 48	9	3.33
	Sept. 49	17	3.338
Traung, Jan-Olof	Aug. 48	25	2.115
Treichler, R.	June 48	7	3.39
Trent, W. R.	May 48	13	6.237
Tressler, D. K.	Jan. 48	13	4.6
Trout, G. C.	Mar. 50	5	2.14
Trupp, H. Y.	Oct. 49	21	5.12
Tysser, H. F.	Dec. 48	7	1.01
Uchida, Y.	June 49	11	6.9
Ueta, M.	June 49	11	6.9
Ulrich, J. A.	May 49	13	3.4
Umali, A. F.	Jan. 50	17	1.019
Underwood, A. J. V.	Aug. 48	1	6.2334
Uota, M.	May 48	1	3.249
Utiyama, H.	July 49	11	7.89
Vail, G. E.	Sept. 49	1	4.21
	Feb. 50	25	3.29
Valentik, K. A.	Aug. 50	21	7.641

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Valz, F. E.	Mar. 48	19	7.872
Van Buren, H. T.	Sept. 49	21	1.016
Van de Merwe, R. P.	Nov. 48	3	3.33
Van den Broek, C. J. H.	Oct. 48	17	2.05
Vandenheuvel, F. A.	July 50	7	6.2332
	Sept. 50	1	6.230
Van der Vliet, J.	April 49	21	8.66
	May 49	23	8.66
Van Rensburg, N. J.	May 48	17	5.11
	Oct. 49	17	8.59
Van Steenis, J.	Dec. 49	3	4.29
Van Wilby, G.	Mar. 48	31	1.0111
Varadan, K. S.	July 49	23	2.9
Vaughan, E.	Jan. 50	9	5.11
Vavich, M. G.	Sept. 50	9	5.121
Venkataraman, R.	July 50	1	7.81
Verdcourt, B.	Feb. 48	17	6.14
Verhagen, D.	Oct. 48	9	7.6132
	Mar. 50	3	7.61
Vestal, C. M.	Feb. 48	13	6.19
Vibrans, F. C.	Mar. 50	1	4.6
	Mar. 50	15	6.130
Volk, B. W.	Jan. 49	13	5.12
Vondell, J. H.	May 48	1	6.19
Voth, M. D.	Oct. 48	15	7.53
	Oct. 49	9	7.53
Vucassovich, M.	April 48	17	3.33
Wake, W. C.	Oct. 49	1	7.777
Wald, G.	Aug. 49	5	5.11
Walker, G. H.	Nov. 49	19	3.231
Walker, W. S.	Dec. 49	19	3.13
Wall, M. E.	Nov. 48	9	7.6139
Wallace, M. M.	Jan. 50	33	1.86
Walsh, T. J.	May 50	1	0.8
Walter, L.	Aug. 50	11	3.61
Ware, R. P.	Nov. 50	11	3.18
Warfel, H. E.	Jan. 50	17	1.019
	July 50	17	1.015
Warkany, J.	April 48	3	5.12
Warron, J.	June 49	19	7.80
Waterman, H. I.	Dec. 49	3	4.29
Watt, D. B.	Sept. 49	1	4.21
Watts, B. M.	April 48	13	4.6
	Aug. 49	11	4.5
	June 50	7	4.64
	Dec. 50	7	4.5
Week, E. F.	Mar. 50	19	5.12
	Sept. 50	5	5.125
Weisblat, D. I.	July 48	15	5.11
Weiss, Z.	July 48	13	5.11
	July 48	21	5.11
Welch, A. D.	Oct. 48	1	6.19
Wendler, N. L.	Jan. 50	31	5.11
Wernett, W. M.	Oct. 50	21	6.1
Westerman, B. D.	Feb. 50	25	5.4
Wharton, J.	June 48	5	1.86
Wheeler, R. S.	Oct. 48	9	6.19
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White, W. R.	April 48	19	2.5
Whitehair, C. K.	Feb. 50	13	6.19
Whiteleather, R. T.	July 48	21	9.7
	Oct. 48	9	2.112
Wiese, A. C.	Oct. 48	9	6.19
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Wiese, C. E.	Feb. 49	7	5.12
Wigutoff, N. B.	Nov. 48	17	1.86
	July 50	1	2.118
	Sept. 50	13	1.0112
Wikholm, D. M.	July 48	11	2.9
	July 48	21	2.9
	May 49	5	8.59
Wilber, C. G.	May 50	3	8.53
	Nov. 50	1	8.53
Wilcke, H. L.	Oct. 49	1	5.4
	Jan. 50	27	5.41
	April 50	25	5.41
Wilder, D. G.	Aug. 48	5	9.17
Wilgus, H. W.	July 49	23	0.7
Wilhelm, J.	June 48	19	1.013
Wilke, F.	Sept. 48	3	5.12
Wilkie, J. B.	Nov. 49	17	7.610
Williams, R. Jr.	Oct. 49	7	6.138
Williams, V. O.	Sept. 48	13	1.87
Williamson, M. B.	Aug. 49	21	4.6
	Sept. 49	23	4.6
Willits, C. O.	Sept. 48	5	7.2
Wills, E. D.	June 48	13	7.872
Wilmot, I.	June 49	7	2.01
Wilson, R. C.	Aug. 48	1	1.87
Wilson, R. W.	Jan. 50	15	2.19
Wilson, S. J.	Sept. 49	11	2.9
Windler, A. B.	May 49	7	0.6
Wingard, M. R.	Nov. 49	13	7.53
Winsten, W. A.	Mar. 50	9	7.641
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Winter, A. R.	Dec. 50	9	5.41
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Wise, G. H.	Dec. 48	15	5.12
Wohlers, H. C.	July 48	5	5.11
Wolf, D. E.	Aug. 49	1	5.4
	Sept. 49	23	7.64
Wolf, R. A.	Nov. 50	11	3.12
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Wood, E. C.	Oct. 49	3	7.80
Wood, E. J. F.	July 48	27	1.81
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Wood, T. R.	Feb. 49	21	6.19
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Woodward, G.	Oct. 49	1	4.6
Woolrich, W. R.	Jan. 50	19	3.234
Wooton, V.	Feb. 49	31	1.95
Work, L. T.	May 50	1	0.8
Wright, H. F.	July 48	5	5.11
	July 48	13	5.11
Wright, L. D.	April 49	7	7.64
	Aug. 50	21	7.641
Wright, R. E.	May 50	1	0.8
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Zelle, L. V.	Sept. 49	3	6.19
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Assay and distribution of vitamin B_{12}, Oct. 49, 17.
Assay of "Animal Protein Factor" using mice, Sept. 49, 15.
Method for the microbiological assay of vitamin B_{12}, B. F. Capps, Norman L. Hobbs, Sereck A. Fox, June 49, 23.
Microbiological assay of growth factors essential for Lactobacillus leichmannii 313 and Leuconostoc citrovorum, K. A. Lees, W. B. Emery, Apr. 50, 23.
Microbiological assay of vitamin B_{12} by Lactobacillus leichmannii, E. L. R. Stokstad, et al, May 50, 23.
Microbiological assay of vitamin B_{12} with Lactobacillus leichmannii, C. E. Hoffmann, et al, May 50, 1.
Microbiological estimation of Lactobacillus lactis Dorner activity with vitamin B_{12} as a standard, M. C. Caswell, Leah K. Koditschek, David Hendlin, Oct. 49, 3.
Observations on the use of Lactobacillus leichmannii 4797 in the microbiological assay of vitamin B_{12}, Helen R. Skeggs, et al, Aug. 50, 21.
Paper chromatography of the vitamin B_{12} group of factors, Lester E. Smith, W. F. J. Culbertson, Apr. 50, 11.

Animal protein factor and vitamin B_{12} (Cont'd)

Paper chromatography of vitamin B_{12} and related bacterial growth factors, W. A. Winsten, Edward Eigen, Mar. 50, 9.
Paper chromatography of vitamin B_{12} and related bacterial growth factors, W. A. Winsten, Edward Eigen, Mar. 50, 23.
Rat growth assay for vitamin B_{12}, Douglas V. Frost, Howard H. Fricke, Henry C. Spruth, Feb. 50, 3.
Some conditions which affect the assay of vitamin B_{12} with Lactobacillus lactis, Dorner, Richard Greene, Abraham J. Brock, R. B. McCormack, Sept. 49, 7.
Use of Lactobacillus leichmannii in the estimation of vitamin B_{12} activity, H. T. Thompson, L. S. Dietrich, C. A. Elvehjem, Aug. 50, 21.
Use of Lactobacillus leichmannii in the microbiological assay of the animal protein factor, Helen R. Skeggs, et al, Apr. 49, 7.

Miscellaneous B complex vitamins

Agar plate assay for biotin, Dorothy Genghof, C. W. H. Partridge, F. H. Carpenter, Apr. 49, 23.
Chemical determination of nicotinic acid in food products, P. O. Dennis, H. G. Rees, Mar. 50, 21.
Microbiological assay for riboflavin, Harry A. Kornberg, et al, May 48, 15.
Paper chromatography of liver extracts, G. E. Shaw, Mar. 50, 11.

ANALYSIS, VITAMINS, MISCELLANEOUS

Chemical assay of foods for vitamin E content, Mary Louise Quaife, Philip L. Harris, Mar. 49, 11.
Micromethod for assay of total tocopherols in blood serum, Mary L. Quaife, Nevin S. Scrimshaw, Oliver H. Lowry, May 50, 23.

ANALYSIS AND COMPOSITION, SPECIFICATIONS AND OIL CONSTANTS

Chromatographic analysis of the unsaponifiable matter of marine animal oils, Lyle A. Swain, Apr. 49, 13.
Colorimetric and potentiometric determination of acid numbers of vegetable and marine oils, Stanley Ames, S. B. Licata, Sept. 48, 11.
Micromethod for determination of unsaturation, W. M. Phillips, W. C. Wake, Oct. 49, 1.
South African fish products. Part XXVIII. The composition of liver oil of the seven-gilled shark - Heptranchias pectorosus, M. L. Karnovsky, W. S. Rapson, H. M. Schwartz, Sept. 48, 19.

ANIMAL PROTEIN FACTOR (see VITAMINS, VITAMIN B_{12} AND ANIMAL PROTEIN FACTOR; ANALYSIS, VITAMINS, B COMPLEX - Animal protein factor and vitamin B_{12})

ANTIOXIDANTS

Ascorbic acid

Ascorbic acid and color in food products, C. W. DuBois, Aug. 49, 3.
Ascorbic acid retards discoloration and rancidity in certain frozen fish steaks and fillets, May 48, 3.
Ascorbyl esters produced commercially for preserving lard, May 49, 5.
Curb mackerel fillet rancidity with new dip and coat technic, L. S. Stoloff, J. F. Puncochar, H. E. Crowther, Dec. 48, 3.
Pro-oxidant effect of ascorbic acid and cysteine in aqueous fat system, D. A. Scarborough, Betty M. Watts, Aug. 49, 11.
Retardation of rancidity in frozen fish by ascorbic acid, J. C. Bauernfeind, E. G. Smith, Oliver Batcher, G. F. Siemers, July 48, 3.
Use of ascorbic acid in frozen fish products, Mar. 49, 9.

Gallic acid and gallates

Activity of butyl gallate as a stabilizer of vitamin A in oil solution, G. Carrara, April 49, 23.
Antioxidant properties of the fatty alcohol esters of gallic acid, S. G. Morris, et al, Jan. 48, 19.
Feeding tests with gallic acid ester antioxidants, Hugo W. Nilson, et al, Aug. 50, 15.
Gallic acid ester antioxidants for fish oils, C. D. Bittenbender, Aug. 50, 3.

Miscellaneous and general

Antioxidant from rice bran, Charles Jarowski, et al, Aug. 49, 21.
Antioxidant stablized material, Abraham Taub, Rose Mary Simone, May 48, 21.
Control of rancidity of fish flesh, H. L. A. Tarr, N. E. Cooke, Jan. 50, 21.
Determination of nordihydroguaiaretic acid in the leaf of Larrea divaricata (Creosote bush), Peter C. Duisberg, Luke B. Shires, C. W. Botkin, Feb. 50, 3.
Effect of added water and antioxidants on the keeping quality of lard, H. J. Lips, Feb. 50, 7.
Flavor problem of soybean oil. IV. Structure of compounds counteracting the effect of prooxidant metals, Herbert J. Dutton, et al, Feb. 49, 1.
Frozen food industry, Clifford Evers, Apr. 49, 11.
Further study of the antioxygen properties of certain carotenoids, Armand Herisset, Apr. 49, 23.
More about new AMIF antioxidant, Sept. 48, 9.
Physicochemical aspects of antioxidants, Hugh S. Taylor, Oct. 49, 21.
Polyphosphates as synergistic antioxidants, Betty M. Watts, June 50, 7.
Relation of fed and injected tocopherols to development of rancidity in the stored meat and utilization of carotene by the rabbit, Ruth Major, Betty M. Watts, Apr. 48, 13.
Some effects of amino acids and certain other substances on lard containing phenolic antioxidants, Donald F. Clausen, W. O. Lundberg, G. O. Burr, Mar. 48, 7.
Stabilization and antioxidants, H. T. Spannuth, Apr. 50, 15.
Stabilized fat compositions, Paul Gyorgy, Martin B. Williamson, Eric T. Stiller, Sept. 49, 23.
Survey of present knowledge, researches, and practices in the U. S. concerning the stabilization of fats, W. O. Lundberg, Mar. 48, 27.
Tests on bacon point way to keep it fresh in cans, John A. Ulrich, May 49, 13.

Phenols

Antioxidant properties of polyhydroxybenzoic acids and their esters. Other nuclear substituted polyphenols, S. G. Morris, R. W. Riemenschneider, Apr. 50, 21.
Butylated hydroxyanisole as an antioxidant for animal fats, H. R. Kraybill, et al, May 50, 1.
Comparison of acute toxicity of hydroquinone and some related di-and trihydroxy benzenes, James Sterner, May 50, 19.
New antioxidant (Butylated hydroxyanisole), May 49, 23.
Toxicity of hydroquinone for laboratory animals, G. Woodward, E. C. Hagen, J. L. Radomski, Oct. 49, 1.

Vitamin A antioxidants

Addition of antioxidants to cod liver paste, Poul Fr. Jensen, Mogens Jul, May 49, 23.
Antioxidant combination improves vitamin A stability, Nov. 48, 19.
Determination of the stability of vitamin A fats and oils and the action of antioxidants, P. B. Müller, July 49, 23.
Effect of storage and acidity on the protection of vitamin A in shark liver oil by antioxidants, S. M. Bose, Apr. 48, 15.
Stabilization of vitamin A in halibut liver oil with norihydroguaiaretic acid (NDGA), John A. Dassow, M. E. Stansby, Dec. 49, 1.

APPARATUS AND EQUIPMENT, LABORATORY AND PLANT

Byproducts

High vac belt dryer improves product, cuts costs, E. G. Hellier, Dec. 49, 19.
It recovers edible products from fish scrap, A. W. Lantz, May 49, 9.

Canning

Jack Gorby invents tuna can-filling machine, July 49, 7.
Machine packed tuna now possible, Jan. 50, 13.
Mechanization in herring industry, Aug. 50, 9.

Fresh fish and shellfish

Apparatus for dipping fish fillets or steaks, A. W. Lantz, Aug. 50, 17.
Electronic scale developed, Feb. 50, 19.
Equipment for boats, shore plants and processing plants etc., Oct. 49, 21.
Fish scaler adapted from equipment for recovery of flesh from fish trimmings, A. W. Lantz, May 49, 13.
Fish scaler and washer, Aug. 49, 15.
Machine for packaging fish, Jan. 50, 19.
New machine for shrimp packers, Aug. 50, 17.
New pump brails fish at rate of 200 tons per hour, May 50, 17.
New shrimp blanching tank, Aug. 50, 13.
New type filleting machines, July, 50, 1.
Packing oysters in barrels, Dec. 49, 9.
Shrimp peeling machine, Jan. 50, 23.
Shrimp sorting machine, A. W. Lantz, Dec. 49, 1.
Universal fillet briner, July 49, 9.

Frozen fish

Frozen food in Germany from 1939-1945, R. Gane, Jan. 50, 11.
New freezer unit installed, Feb. 50, 17.

General fish processing

Care and preservation of fish as food (c) trends and developments in fish technology, C. L. Cutting, Jan. 50, 1.
Control devices up output, boost quality, cut costs, W. S. Young, K. A. Bell, Jan. 50, 11.

Laboratory

Apparatus for counter current distribution, Lyman C. Craig, Otto Post, July 49, 17.
Apparatus for evaporation of low-boiling inflammable solvents, Roberto Mercado, May 50, 1.
Apparatus for weighing and transfer of materials, William Clegg, Apr. 50, 17.
High accuracy and high speed pipettes and associated apparatus, H. N. Ridyard, June 49, 19.
Oceanography and sardines, Aug. 49, 7.
Portable ion exchange unit yields 10 million ohm water, May. 50, 9.
Simple automatic water distiller, Narciso Codera, I. L. Lawas, Feb. 50, 15.
Simple shaking device for Conway Units and similar appliances, W. M. Dale, May 50, 21.
Small laboratory centrifugal molecular still, R. M. Biehler, et al, Feb. 50, 21
Use of the Waring blendor in biochemical work, Rosa Stern, L. H. Bird, Apr. 50, 23.
Variability in the Beckman spectrophotometer, W. O. Caster, May 50, 9.

Temperature measurement

Apparatus for the measurement of the rate of heat penetration in foods, O. F. Ecklund, Mar. 50, 21.
Distant action thermometer for fish products, J. Marshak, Mar. 48, 11.
Method of constructing Cu-constantan thermocouples, H. J. Carter, Mar. 49, 3.
Simple method for welding thermocouples, James Riley, June 49, 15.
Simplified thermocouple seal, B. W. Nielsen, Feb. 50, 17.
What's the temperature? Geo. E. Howard, E. J. Hanna, May 50, 17.

ASIATIC FISHERIES

China

Export of marine products to the U. S. from Hong Kong, Feb. 49, 5.
Red snapper grounds discovered off coast of China, Sept. 50, 25.

General and miscellaneous

Aquatic resources of the Ryukyu area, Sydney Shapiro, July 49, 17.
Ceylon fishing industry, Sept. 49, 21.
Fish export market in middle east, J. M. oyer, Nov. 48, 13.
Fish farming in Israel, June 50, 15.
Fishing industry of the Gulf of Aden (Arabia), Robert E. Ferris, Aug. 49, 17.
Indo-Pacific fisheries council, A. W. Anderson, Feb. 49, 19.
Malay's freshwater fish plan, June 49, 9.
Report on the fisheries industry in the Republic of Korea, Sept. 50, 21.
Zamboanga - a resident writes of the rich fisheries now latent in the Spice Island Seas, David Springer, June 48, 17.

India

Freezing at the fishing grounds, July 50, 9.
India develops plans for big purse seine fishery, John Broman, Nov. 49, 17.
Studies on fish spoilage, a comparative study of certain analytical methods of the estimation of total valatile base and trimethylamine in India fish, R. Venkataraman, S. T. Chari, July 50, 1.

Japan

Canned crab industry of Japan, A. R. Cahn, S. C. Oglesby, Dec. 48, 15.
Equipment and processing methods used by Japanese Antarctic whaling expedition, Mar. 50, 17,
Export of whale and fish liver oils, Japan, Feb. 48, 21.
Japanese factory ships big Antarctic catch, Feb. 50, 21.
Japanese fisheries, Sept. 48, 9.
Japanese fisheries in 1949, June 50, 25.
Japanese liver oil potencies, Apr. 48, 13.
Japanese long-line fishery for tuna, Sydney Shapiro, Sept. 50, 3.
Japanese oyster industry, E. J. Ferguson Wood, July 48, 27.
Japanese products offered for export, Aug. 48, 15.
Japanese tuna fisheries, Sydney Shapiro, Katsuzo Kuromumo, Aug. 48, 3.
Japs cash in on seaweed, Howard W. Seibert, Aug. 48, 13.
Natural resources problem in Japan, H. G. Schenck, Jan. 49, 5.
Observation on the Japanese clam fisheries, John B. Glud, Jan. 49, 19.
Ocean resources and Japanese enterprise, John L. Kask, Sept. 48, 15.
Three quarters of the world, John L. Kask, Apr. 48, 19.
U. S. trade with Japan, Feb. 49, 11.

Philippines

Marketing and processing of fish in the Philippines, J. S. Clague, Jan. 49, 19.
Reef fishing in the Philippines, Augustin F. Umali, Herbert E. Warfel, Jan. 50, 17.
Shark fishing potentialities of the Philippines Seas, Herbert E. Warfel, John A. Clague, July 50, 17.

Siberia

Fish catch in eastern regions U. S. S. R., Jan. 48, 9.
Fisheries of the Soviet, June 48, 11.

AUSTRALIAN AND NEW ZEALAND FISHERIES

Australia

Australia is busy building its fish canning industry, Aug. 49, 3.
Australian agar - agar production, Aug. 48, 11.
Australians like shark steak, Mar. 50, 5.
Australian tuna rated equal to Californian, Jan. 50, 5.
Australia's shark liver oil industry, Apr. 50, 7.
Canned fish in Australia, Oct. 48, 1.
Common Australian fishes, Apr. 50, 19.
Notes of a Canadian scientist in the South Pacific, May 50, 21.
Pacific tuna fisheries (Japan, U.S.A., Australia), Apr. 49, 7.
Pearling again at Darwin, Oct. 48, 3.
Preservation of fish, May 49, 13.
Scallop fishery living on good past years, Mar. 50, 21.
Seal flesh from Australia, Dec. 48, 23.

New Zealand

Big game fishing creates new industry, Mar. 49, 3.
New Zealand factor in agar market, Feb. 48, 13.
New Zealand, fish and liver oils, Mar. 50, 25.
New Zealand fish oils. 5. Composition of the fats of the school shark, (Galeorhinus australius Macleay), A. P. Oliver, F. B. Shoreland, Mar. 49, 19.
Whaling and canning whale meat in New Zealand, Neal Carter, Feb. 50, 13.

AUTOLYSIS (see SPOILAGE)

BACTERIA (see SPOILAGE; ANALYSIS, GENERAL - Bacteriological examination; PRESERVATIVES AND SANITATION)

BIOLOGY (see FISHERY BIOLOGY AND FISH CULTURE - Fishery biology)

BOOKS (see PERIODICALS AND BOOKS)

BRITISH FISHERIES (see EUROPEAN FISHERIES - British Isles)

BYPRODUCTS, MISCELLANEOUS

Chemicals and pharmecenticals

Cholesterol from fish meal, S. A. Beatty, July 48, 1.
New insulin sources, Sept. 48, 23.
Possible marine sources of insulin, N. E. Cooke, Geo. Campbell, June 50, 1.
Utilization of fish wastes. Commercial enzymes from the pyloric caeca of fish, N. E. Cooke Niranjan K. Chowdhury, Nov. 48, 11.

General and miscellaneous

Bait is big business, Sept. 49, 9.
Byproducts of fish industry, Sydney Feener, Earl McFee, Sept. 49, 5.
Byproducts situation existing in Europe today, Oct. 49, 7.
Developments in fishery byproducts. C. Butler, Aug. 48, 13.
Fish byproducts, Feb. 49, 17.
Fisheries byproducts - the job ahead, James Burrell, Aug. 49, 1.
Fishery byproducts, Stanley Letson, Aug. 49, 9.
Fishery byproducts, F. B. Sanford, Aug. 50, 21.
Greater byproduct utilization can increase profits, Feb. 50, 1.
Marine byproducts, Stanley W. Letson, Dec. 49, 3.
New fish byroducts, Apr. 50, 25.
Norway - fishery developments, July 50, 19.
Possibilities in developing fisheries byproducts, H. L. A. Tarr, Oct. 48, 7.
Possibility of development of new products from salmon cannery waste, G. I. Jones, E. J. Carrigan, Mar. 48, 1.
Studies on the organs of marine animals. I. A basic experiment on the utilization of fish eggs, Michio Takaoka, et al, Aug. 49, 23.
Technological studies of the starfish. V. Starfish as fertilizer, Chas. F. Lee, Oct. 48, 13.
Technological studies of starfish. VI. Economic considerations in the utilization of starfish, Chas. F. Lee, Dec. 48, 5.
Utilization of fish waste. The economics of the separation of salmon offal, N. E. Cooke, Mar. 50, 1.
Value of cod liver residue, A. Guttman, Sept. 50, 1.

Leather

Leather from salmon skins, July 49, 5.
Tanning fish skins (plateis sp), Exner, Fukatko, Apr. 49, 21.

Protein and amino acids

Albumen concentrate from fish, Dec. 48, 23.
Bacteriological peptones from fish flesh, H. L. A. Tarr, Catherine P. Deas, Jan. 50, 9.
Low temperature hydrolysis of commercial proteins, J. E. Bird, L. J. Miner, Apr. 48, 3.
New uses for fish protein, Sept. 50, 1.
Pilot plant for fish albumen, Sept. 48, 17.
Rough estimate of cost of producing fish albumen, G. M. Dreosti, Apr. 48, 15.
Utilization of fish wastes. Bacteriological peptones from fish, H. L. A. Tarr, C. P. Deas, Nov. 48, 5.

Shell products

Dry ice from oyster shells, Aug. 48, 15.
Laminary structure and iridescence of pearls, Yoichi Uchida, Masayasu Veta, June 49, 11.
Ocean yields oyster shells for feed, Carrel K. Michener, Mar. 50, 7.
On the porphorin bodies contained in pearls, T. Kosaki, June 49, 13.
Pearl culture in Japan, A. R. Cahn, May 50, 23.

Whale byproducts

Ambergris in perfume extracts, Victor Hasslauer, Jan. 48, 9.
Equipment and processing methods used by Japanese Antarctic whaling expedition, Mar. 50, 17.
More whale byproducts, July 49, 21.
Whale gelatin. I. A new preparation of gelatin from the blue whale skin and its physicochemical properties, Hitomaro Nito, Aug. 49, 23.

CANADIAN FISHERIES (see NORTH AMERICAN FISHERIES - Canadian fisheries)

CANNED FISH, GENERAL

Canning in specific geographical areas

Australia is busy building its fish canning industry, Aug. 49, 3.
Canned fish in Australia, Oct. 48, 1.
Danish fishery products, Frode Bramsnes, Mar. 50, 17.
Fish and fish products. Salmon pack, British Columbia, Canada, Oct. 48, 13.
Fish canning in Eire, Jan. 49, 11.
Fish canning on the New England coast, Micheal Vucassovich, Apr. 48, 17.
Fishery industry of North America. Part III. Canning, J. A. Lovern, Sept. 48, 11.
Herring canning in Germany, E. P. Sidaway, June 48, 5.
Situation in salmon industry, British Columbia, Canada, Feb. 48, 5.
Tuna canning in British Columbia, Peter Madison, Nov. 48, 9.

General and miscellaneous

Apparatus for the measurement of the rate of heat penetration in foods, O. F. Ecklund, Mar. 50, 21.
Canned fish hand - I - Book, July 50, 3.
Glues and gluing. Problems, practices and materials in fish canneries, Wm. M. Cowley, July 50, 7.
It recovers edible products from fish scrap, A. W. Lantz, May 49, 9.
Literature on fish canning, May 48, 21.
New book: Canning Technology, Aug. 50, 21.
Quality and informative labeling, Harry R. Beard, Aug. 50, 3.
Ship-wrecked salmon, Feb. 48, 17.
Use of statistical methods of research on food canning, W. B. Adam, June 48, 5.
Utilization of fish waste. The economics of the separation of salmon offal, Norman E. Cooke, Mar. 50, 1.

Loading and transportation

Hoist speeds fish handling and retort room work, May 48, 11.
New hydra-vac lift speeds fish direct from boat to cannery, Tom Cameron, Mar. 50, 13.
Trucks rush fish catch from boats to canneries, Apr. 49, 19.
Unloading fish from boat into cannery by pumps, June 49, 1.

Nutritive value and composition

Canned fish high in protein, E. J. Cameron, May 50, 19.
Chemical composition of some canned fishery products, Ray Treichler, Chas F. Lee, N. D. Jarvis, June 48, 7.
Nutritive value of canned foods. I. Amino acid content of fish and meat products, Max S. Dunn, Merrill N. Camien, Samuel Eiduson, Ruth B. Malin, May 50, 5.
Nutritive value of canned foods. XXV. Vitamin content of canned fish products. J. B. Neilands, F. M. Strong, C. A. Elvehjem, Mar. 48, 15.
Survey shows high nutrient levels in canned foods, May 49, 15.

Special products

Blanching oysters booms demand, Jan. 50, 23.
Brine for crawfish canning, G. M. Dreosti, R. P. Van de Merwe, Nov. 48, 3.
Can lobsters alive at east coast plant, June 50, 17.
Canned crab industry of Japan, A. R. Cahn, S. C. Oglesby, Dec. 48, 15.
Canned oyster stew and soup, A. W. Lantz, June 50, 3.

Special products (Cont'd)

Canning Dungeness crabmeat, E. W. Harvey, F. C. Mann, Oct. 48, 13.
Canning of anchovies, S. W. Roach, J. S. M. Harrison, May 49, 9.
Canning of mackerel shark, Alice Brunn, Knud Nielsen, May 49, 21.
Cornish pilchard canning industry, J. R. Burrell, May 50, 13.
Experiments on the canning of freshwater fish, A. W. Lantz, June 48, 17.
Freezing and canning of king crab, John A. Dassow, Sept. 50, 13.
Fresh water fish canning, Aug. 50, 9.
French sardine canners keep accent on taste, Henri Cheftel, May 50, 13.
Herring canning, Dec. 48, 19.
Herring products, A. W. Lantz, Jan. 48, 15.
Little tuna on the Atlantic and Gulf Coast, Cyrus H. Chilton, Apr. 50, 7.
New seagoing whale meat cannery, W. J. Elois Johnson, Apr. 49, 11.
Offering canned scallops, Aug. 49, 21.
Preserving crab meat, J. J. Ganuchean, May. 49, 17.
Strained tuna baby food, June 50, 1.
They engineered a better canned salmon, Ralph M. Berglund, Aug. 50, 3.
Whale meat tasting parties, Sept. 50, 15.
Whaling and canning whale meat in New Zealand, Neal Carter, Feb. 50, 13.
Why not popularize pollock? Sept. 50, 7.

Spoilage and quality control

Biological stability of canned marine products, E. P. Sidaway, Nov. 48, 7.
Canning of frozen salmon, Aug. 48, 1.
Examination of swells in canned food of the low acid type, Ole Møller, Mogens Jul, Apr. 49, 13.
Maillard reaction in fish products, H. L. A. Tarr, Sept. 50, 13.
Probable cause of the browning of certain heat processed fish products, H. L. A. Tarr, June 48, 1.
Retort management and spoilage control I, James M. Reed, May 48, 5.
Retort management and spoilage control II, James M. Reed, May 48, 11.
Swelling and corrosion in canned fish, F. L. Capont, July 49, 23.
Testing of keeping qualities of canned food products, Ole Møller, et al, Apr. 49, 5.
Use of the spherometer in tests of hydrogen swells, W. B. Adam, Feb. 48, 17.

CANNED FISH, CONTAINERS

Aluminum cans, D. Nickelson, July 48, 23.
Comparative heat penetration studies on jars and cans, C. T. Townsend, et al, Sept. 49, 17.
Condensation and rust on canned goods in storage, D. H. Rose, H. D. Johnson, Apr. 48, 7.
Corrosion of containers for canned foods, Finn Jakobsen, Erling Mathiesen, Apr. 48, 17.
Corrosion of tinplate food containers, Hugh A. McKenzie, Jan. 48, 11.
Heating rates of food in glass and other containers, D. G. Merrill, Mar. 49, 19.
Norwegian food industry packs in aluminum cans, Dag Nickelson, Feb. 48, 17.
Possibilities of using aluminum cans and the results of recent experiments in Denmark, F. Bramsness, Sept. 49, 23.
Processing food in glass containers, W. B. Esselen, et al, May 48, 9.
Rust prevention in cans, R. S. Gillies, Jan. 48, 5.
Some aspects of packaging in metal containers, R. K. Sanders, July 49, 1.
Studies on substitute containers for canned fishery products, Norman D. Jarvis, Lynne G. McKee, June 49, 7.
Use of aluminum for food cans, P. Thompson, Apr. 48, 9.
Will we follow Europe in use of aluminum cans? John V. Ziemba, Aug. 48, 13.

CANNED FISH, PROCESSING

General and miscellaneous

Canning of frozen salmon, Aug. 48, 1.

General and miscellaneous (Cont'd)

Canning of whale meat studied, July 49, 19.
Discuss fish packing and shipping, July 48, 15.
Fishery industry of North America. Part III. Canning, J. A. Lovern, Sept. 48, 11.
Fresh water fish canning, Aug. 50, 9.
Gas and its use in fish canning, A. E. Marshall, Mar. 50, 21.
Growing menace to fish canneries, Aug. 48, 7.
Modern developments in canning plant sanitation, J. S. Gardner, May 48, 9.
New technics in commercial preservation of fish, Norman D. Jarvis, Hugo W. Nilson, Feb. 48, 25.
Panel discussion brings out much valuable technical information, June 48, 13.
Pressure cooling cannery retort system, J. S. M. Harrison, S. W. Roach, Dec. 49, 13.
Processing technology for salmon and crab, Feb. 49, 19.
Report of the technology division, C. L. Anderson, Feb. 49, 15.
They engineered a better canned salmon, Ralph M. Berglund, Aug. 50, 3.
Use of monosodium glutamate in sea food products, Carl A. Fellers, Nov. 48, 9.

Machines and equipment

Automatic loading of retort baskets increases production 20 to 30%, Nov. 49, 5.
Continuous retorting may cut costs 20 cents a case, Jan. 50, 11.
Continuous sterilizer increases capacity, improves quality of canned goods, May 48, 11.
Control devices up output, boost quality, cut costs, Wendell S. Young, Kenneth A. Bell, Jan. 50, 11.
Fish scaler adapted from equipment for recovery of flesh from fish trimmings, A. W. Lantz, May 49, 13.
Jack Gorby invents tuna can-filling machine, July 49, 7.
Machine packed tuna now possible, Jan. 50, 13.
Machine process boneless, skinless salmon, June 49, 9.
Salmon slicers, Jan. 48, 11.
Salmon tuna cannery equipment wins praise, June 50, 19.
Skinless, boneless salmon, July 48, 27.

Preservatives

Canning methods that replace heat may cause vitamin losses, July 48, 5.
Preservation of foods with antibiotics. I. The complementary action of subtilin and mild heat, Ariel Andersen, H. Davia Michener, Aug. 50, 1.
USDA workers succeed in preserving canned protein foods with anti-biotics, mild heat, Sept. 50, 13.

Thermal processing

Heating rates of food in glass and other containers, D. G. Merrill, Mar. 49, 19.
Sterilization of foods, J. M. Jackson, H. A. Benjamin, Apr. 49, 3.
Thermal processing of canned meats, June 48, 7.
USSR studies preserving by super high pressure, Nov. 48, 17.

CLAMS (see SHELLFISH AND CRUSTACEANS, MISCELLANEOUS - Clams)

COD FAMILY

General and miscellaneous

Cod fished in Norway with deep water purse seine, Dec. 49, 23.
Codfish in big tins for the Philippines, Apr. 50, 25.

General and miscellaneous (Cont'd)

Danish fishery products, Frode Bramsnes, Mar. 50, 17.
Lipoprotein complexes, Franklin Kidd, Aug. 50, 11.
Note on the estimation of sulfur dioxide in fish muscle, J. M. Shewan, Apr. 49, 3.
Some technological aspects of the fresh and frozen seafood industry, Harry Beard, Sept. 50, 17.
Torry research report for 1947, Franklin Kidd, Jan. 50, 7.
Trawling for codfish to be ventured again in the Bering Sea, Feb. 48, 19.
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Bibliographies on the chemical nature of fish and fish nutrition, Ed. J. Carrigan, Neva L. Karrick, Mar. 48, 7.
Chemical composition of some canned fishery products, Ray Treichler, Chas. F. Lee, Norman D. Jarvis, June 48, 7.
Composition and nutritive value of fresh, cooked and processed swordfish, Antonio Lopez-Matas, Carl R. Fellers, Feb. 49, 17.
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Shark liver oil from Trinidad, F. Major, R. W. Pearman, May 50, 11.

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Amino acid composition of fishery products, Catherine P. Deas, H.L.A. Tarr, Jan. 50, 9.
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Animal protein factor in fish products, Phyllis W. Ney, H. L. A. Tarr, Dec. 49, 9.
Assay and distribution of vitamin B_{12}, Oct. 49, 17.
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Some studies on the content of thiamine and anti-thiamine factor in fishery products, Clara Gale Goldbeck, Mar. 48, 17.

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Technological studies of the starfish. IV. Thiaminase in starfish, Chas. F. Lee, Sept. 48, 17.
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Nutritive value of canned foods, XXV. Vitamin content of canned fish products, J. B. Neilands, et al, Mar. 48, 15.
Vitamin E content of foods, Philip Harris, Mary L. Quaife, William J. Swanson, June 50, 1.

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Activity of the oil of the crab in the vitamin A deficient rat, Rene Grangaud, Renee Massonet, Aug. 49, 9.
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Vitamin A content of raw and canned Norwegian brisling sardines, Hans Kringstad, Valborg Aschehoug, Sept. 48, 21.
Vitamin A in liver of Alaska fur seal, F. B. Sanford, K. W. Kenyon, V. B. Scheffer, Sept. 49, 15.
Vitamin A in seals, K. Rodahl, A. W. Davies, Mar. 50, 11.
Vitamin A in the intestine (pyloric caeca) of the halibut, J. Glover, R. A. Morton, Nov. 48, 11.
Vitamins in whale liver, Olaf R. Braekkan, June 49, 7.
Whale liver oil, Lyle A. Swain, Dec. 49, 3.

Vitamin A in shark oils

Absence of vitamin A in liver oil of the brown shark, F. Bruce Sanford, Kelshaw Bonham, July 50, 15.
Biological and vitamin A studies of dogfish (Squalus suckleyi) landed in the state of Washington, Kelshaw Bonham, et al, Nov. 49, 3.

Vitamin A in shark oils (Cont'd)

Distribution of vitamin A shark livers, U. S. Kini, R. Jayarman, July 48, 31.
New Zealand fish oils. 5. Composition of the fats of the school shark (Galeorhinus australis), A. P. Oliver, F. B. Shorland, Mar. 49, 19.
Notes on the vitamin A content of the liver oil of the vaalhaii or soupfin shark (Galeorhinus zyopterus), J. A. M. Archer, July 50, 13.
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Preliminary report on the soupfin shark fishery in Washington, Kelshaw Bonham, F. Bruce Sanford, Nov. 49, 3.
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Antirachitic sulfonation of fats and oils, Lester Yoder, R. H. Thomas, Jan. 50, 3.
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Vitamin D content of preserved fish, M. L. Herraiz, Elina Musmanno, Feb. 49, 31.

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Extra lesson on fish, Evelyn Platt, May 48, 21.
How housewives can balance their budgets with seafoods, Nov. 48, 3.
Radar energy for rapid food cooking and blanching, and its effect on vitamin content, Bernard E. Proctor, Samuel A. Goldblith, July 48, 3.
Use of monosodium glutamate in sea food products, Carl A. Fellers, Nov. 48, 9.
What glutamate does in food, S. E. Cairncross, L. P. Sjöstrom, Sept. 48, 7.

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American Venture trawling in Bering Sea for crab and cod, Aug. 48, 11.
Boundry bay crabbers find advantage in monel crab pots, Apr. 50, 13.
Crab fishing off the Queen Charlotte Islands, R. G. McMynn, June 50, 11.

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Exploring king crab's kingdom, Carl B. Carlson, N. B. Wigutoff, Nov. 48, 17.
Hunting king crab, Feb. 48, 11.
King crab, three expeditions work for Alaskan fishery, Jan. 48, 3.
Live box hold features Furfiords' crab craft, Aug. 49, 21.
S. S. Pacific Explorer Part V-1948 operation in the north Pacific and Bering sea, Norman B. Wigutoff, Carl B. Carlson, July 50, 1.
Trotline construction, operation and maintenance, Emmett Andrews, Sept. 48, 19.

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Activity of the oil of the crab on the vitamin A deficient rat, Rene Grangaud, Renee Massonet, Aug. 49, 9.
Chesapeake Bay crab industry, James Wharton, June 48, 5.
Chesapeake blue crab, Curtis L. Newcombe, Allen M. Eckstein, Frank Campbell, Oct. 49, 21.
Contribution to the biology of king crab, M. Marvin Wallace, et al, Jan. 50, 33.
Contribution to the knowledge of the liver enzymes of the salt water crab, H. Saitoo, M. Hino, Feb. 49, 31.
Cook Inlet kings flown to Seattle, Feb. 50, 21.
Parks flying frozen crabmeat from Alaska by the planeload, Jan. 48, 7.

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Canned crab industry of Japan, A. R. Cahn, S. C. Aglesby, Dec. 48, 15.
Canned fish hand - i - book, July 50, 3.
Canning Dungeness crabmeat, E. W. Harvey, F. C. Mann, Oct. 48, 13.
Freezing and canning king crab, John A. Dassow, Sept. 50, 13.
Indole in shrimp, oysters and crabmeat. Tentative analytical method, May 48, 17.
Longevity of the coliform bacteria and enterococci in iced crabmeat, C. S. McClesky, Albert F. Boyd, Jr, Jan. 50, 7.
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Report of decomposition of shellfish indole in shrimp, oyster and crabmeat, R. E. Dugan, Nov. 48, 15.
Vacuum packed frozen crabmeat in 5 lb tins, June 50, 11.

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Care and preservation of fish as food. B. Some bacteriological aspects of handling processing and distribution of fish, J. M. Shewan, Jan. 50, 1.
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Drying of fish, A. F. Banks, C. L. Cutting, G. A. Reay, Feb. 48, 13.
Efficient operation of drying plant, Part I, Leo Walter, Aug. 50, 11.
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Nomograph for drying calculations, H. Fougere, July 50, 9.
Norway fishery developments, July 50, 19.
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Production of dried codfish, Halvor Petersen, May. 49, 5.
Some factors affecting the oxidation of the fat of dehydrated herrings, A. Banks, July 50, 3.
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Ultra-violet ray for detecting shell in picked crab meat, S. W. Roach, Dec. 49, 1.

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Canadian consumption of fish 1948, Feb. 50, 15.
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Fishing industry and the market for fish in Sweden, Geo. Frostensen, Aug. 49, 13.
Future of U. S. fishery resources, Thor C. Tollefson, May 48, 17.
Rough estimate of cost of producing fish albumen, G. M. Dreosti, Apr. 48, 15.
1948 U. S. per capita fish consumption increased, Jan. 50, 33.
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Economic situation in world markets, Feb. 49, 13.
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How does Canada's austerity program affect the British Columbia fishing industry? Mar. 48, 7.
National resources and foreign aid, May 48, 19.
Newfoundland: Fish exports in 1947 weaker, Jan. 49, 17.
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U. S. trade with Japan, Feb. 49, 11.

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Canadians report new data on their albacore fishery, Feb. 49, 9.
Cod liver oil, Harry G. Kelby, June 49, 13.
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Fish liver oil industry, C. Butler, July 48, 11.
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List of fishery associations in U. S. and Alaska, Oct. 49, 23.

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Manufacture of meal and oil utilizes half of the fisheries catch, Aug. 50, 3.
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Salted cod and related species, G. M. Gerhardsen, L. P. D. Gertenbach, Nov. 49, 1.
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Electrolytic attack on marine equipment, Apr. 50, 1.
Equipment for the boats, shoreplants, processing plants etc., Oct. 49, 21.
Fishing vessel construction, July 48, 25.
Mechanism of the corrosion of aluminum, L. C. Salter, R. A. Kahn, Aug. 48, 27.
Norwegian factory ship on maiden voyage, July 48, 23.
Progress in fishing fleets, Great Britain, Feb. 48, 25.
Small boat stabilizers, W. L. Scofield, Apr. 50, 15.
Up to date ice chisel for fisherman, R. A. McKenzie, Sept. 50, 23.

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Electric hoist speeds fish handling, Jan. 48, 3.
Hoist speeds fish handling and retort room work, May 48, 11.
Hydraulic power drives all auxiliaries of new tuna seiner, Aug. 49, 1.
New type air controlled winch for commercial fishing, Jan. 49, 15.
Torque converters of fishing winches, A. E. Young, Aug. 48, 31.

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Freezing fish at sea, J. M. Lemon, C. B. Carlson, Feb. 48, 21.
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Modern developments in marine refrigeration, S. W. Brown, Mar. 48, 23.
Place of panetary reduction gears in fishing vessel propulsion, S. L. Crawshaw, Jan. 50, 31.
Refrigeration in fishing vessels, E. W. Hicks, Feb. 49, 15.
S. S. Pacific Explorer. Part III. Below deck arrangements and refrigeration equipment, Carl B. Carlson, Mar. 49, 11.

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British test sub detector on herring fishing banks, David Curnock, Sept. 48, 15.

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Echo sounder for small boats, Chas. R. Burrows, Apr. 50, 23.
Electronic fish finder, Don Eddy, Oct. 49, 3.
Electronics takes "Guess" out of fishing, Sept. 50, 23.
John N. Cobb - explorer, July 50, 7.
Loran rings cash register for fish boats down to troller size, Feb. 50, 23.
New depth sounder, Aug. 50, 19.
Radar in the fisheries, Apr. 50, 1.
Radio buoys for marking fishing gear, grounds, May 50, 13.
Remote control steering, Feb. 48, 21.
Sounder finds shoals, ring net gets fish, Apr. 49, 7.
Tuna clipper makes radar pay, Nov. 48, 5.
Woods Hole oceangraphers use rakes literally wired for sound to locate underwater clam beds, Feb. 50, 3.

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Care and preservation of fish as food.(a) General introduction to technological problems of the fish industry, G. A. Reay, Jan. 50, 1.
Cornish pilchard canning industry, J. R. Burrell, May 50, 3.
Fish canning in Eire, Jan. 49, 11.
Fisheries in Scotland, Apr. 49, 3.
Modern fish processing plant at Grimsby, Feb. 50, 21.
Potential seaweed industry for Scotland, Sept. 48, 5.
Quick freezing at sea, Feb. 48, 27.
Seasonal variation in chemical constitution of some of the sublittoral seaweeds common to Scotland. II. Laminaria digitata, W. A. P. Black, Dec. 48, 5.
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Trends of refrigeration in Great Britian, W. R. Woolrich, Jan. 50, 19.
White fish for quick freezing, Mar. 49, 15.

Denmark

Danish activities, Apr. 50, 17.
Danish fishery products, Frode Bramsnes, Mar. 50, 17.
Danish fishing as an export industry, Sept. 48, 17.
Fat content of Danish caught North Sea trawl herring 1948 and Skagerrak herring 1949, A. Mygind, July 50, 7.

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Byproduct situation existing in Europe today, Oct. 49, 7.

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French sardine canners keep accent on taste, Henri Cheftel, May 50, 13.
Six 240 foot trawlers built for France, Mar. 49, 1.

Germany

Drawings and parts lists for fish processing machines, Feb. 48, 5.
Fisheries of Germany, Mar. 50, 5.
Fish meal and herring meal processing machinery industry, and fish meal and herring meal processing industry, E. L. Richardson, Jan. 48, 15.

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Freezing progress in Germany, R. Gane, Mar. 48, 23.
Frozen foods in Germany from 1939-1945, R. Gane, Jan. 50, 11.
German research on fat conversion from plankton, July 49, 3.
German shrimp processing industry, H. S. Bondi, et al, Jan. 48, 9.
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Fish and fish products: Developments in herring industry, Iceland, May 48, 13.
Iceland plans reduction equipment on trawlers, Aug. 50, 7.
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Whale and fish oils, Iceland, William S. Krason, Feb. 50, 23.

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Fish and fish products. Netherlands fishing fleet active, July 48, 19.
Netherlands herring fishery, Aug. 48, 13.
Whale catch and oil output- Netherlands, Aug. 48, 1.

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Albumen concentrate from fish, Dec. 48, 23.
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Growing herring oil industry in Norway, Dec. 49, 13.
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Norway whaling prospects called bright, Mar. 48, 13.
Norwegian factory ship on maiden voyage, July 48, 23.
Norwegian food industry packs in aluminum cans, Dag Nickelson, Feb. 48, 17.
Norwegian net floats and buoys, Aug. 50, 15.
Norwegian whalemeat production, M. Ingram, Apr. 48, 9.
Norwegians eye fisheries of Galapagos, Jan. 49, 7.
Production and exports - Norway, Jan. 49, 5.
Simultaneous fishing, loading in Norway, July 50, 11.
Whale and herring catch, and oil output, Norway, Jan. 49, 5.
Whaling of first importance among Norweigen industries, S. G. MacDonald, June 50, 17.

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Codfish industry in Northern Portugal, Randall T. Klein, Jr., Aug. 50, 21.
Developments in Spain's fishing industry, Feb. 48, 3.
New codfish curing plants in Spain, Feb. 49, 13.
Smaller fish catch, Vigo, Spain, Feb. 49, 11.
Spain - a review of its fishing industry, Dec. 49, 17.
Spain's fish catch, Dec. 48, 7.

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Fishing industry and the market for fish in Sweden, George Frostenson, Aug. 49, 13.

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Canning on USSR fishing trawlers, Jan. 48, 17.
Fisheries of the Soviet, June 48, 11.
Operations of Soviet fishing flotillas, Jan. 49, 5.

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Alaskan albacore explorers pin point positions of tuna schools with loran, Mar. 50, 11.
Albacore tuna exploration in Alaskan and adjacent waters - 1949, Donald E. Powell, Henry A. Hilderbrand, Sept. 50, 3.
Albatross III, William F. Royce, Aug. 48, 19.
Australian tuna rated equal to Californian, Jan. 50, 5.
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King crab-three expeditions work for Alaskan fishery, Jan. 48, 3.
New argonauts push hunt for tuna to South Pacific, D. G. Brazier, Mar. 48, 1.
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United Kingdom, Oct. 49, 13.
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Woods Hole oceanographers use rakes literally wired for sound to locate underwater clam beds, Feb. 50, 3.

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American Venture trawling in Bering Sea for crab and cod, Aug. 48, 11.
Canning on USSR fishing trawler, Jan. 48, 17.
Complete canning equipment for whale ship, May 49, 21.
Equipment and processing methods used by Japanese Antarctic whaling expedition, Mar. 50, 17.
Fish frozen on floating plant, July 48, 29.
Floating fish factory, Sept. 48, 13.
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Freezing at the fishing grounds, July 50, 9.
Freezing fish at sea, J. M. Lemon, C. B. Carlson, Feb. 48, 21.
Giant whale factory ship, Dec. 48, 23.
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Iceland plans reduction equipment on trawlers, Aug. 50, 7.
Japanese factory ships big Antarctic catch, Feb. 50, 21.
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Prying open the gate to the great field of small craft refrigeration, Aug. 49, 13.
Quality control of freezership tuna, C. B. Carlson, Aug. 48, 19.
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Trawling for herring, May 49, 11.
Whale factory ship, Dec. 48, 19.
Whalemeat, Franklin Kidd, Jan. 50, 1.

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Conservation

Biological and vitamin A studies of dogfish- (Squalus suckleyi) landed in the State of Washington, K. Bonham, et al, Nov. 49, 3.
Care and preservation of fish as food (a) general introduction to technological problems of the fish industry, G. A. Reay, Jan. 50, 1.
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Management of ocean fisheries, Edward W. Allen, May 49, 1.
New shrimp net designed to release immature fish, Sept. 49, 5.
Preliminary report of the soupfin shark fishery in Washington, Kelshaw Bonham, F. Bruce Sanford, Nov. 49, 3.
States to limit soupfin landings to male livers, Apr. 49, 15.

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Biological assay of the nutritional value of certain salmon cannery waste products, Roger E. Burrows, Neva L. Karrick, Mar. 48, 23.
Comparative study of oyster condition, Robert M. Ingle, Sept. 49, 3.
Feeding experiments at Minter Creek biological station, Norman A. Riddell, Mar. 49, 7.
Fertilizing the sea, May 48, 7.
Fish farming in Israel, June 50, 15.
Fish foods as used in the states of California, Idaho, Oregon and Washington during 1947, Lauren R. Donaldson, Jan. 49, 19.

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Fish pond culture in China, S. Y. Lin, May 50, 23.
Folic acid requirements of trout, Arthur N. Phillips, Jr., et al, Feb. 50, 25.
Non-carotene provitamin A for fishes, Charles E. Lane, Sept. 50, 5.
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Nutrition of rainbow trout. II. Further studies with purified rations, B. A. McLaren, July 48, 17.
Some observations concerning an unidentified growth factor for young trout and salmon, Norman Cooke, et al, Mar. 50, 9.
Sponge culture, Aug. 48, 9.
Use of cod liver oil in the diet of hatchery reared trout, Arthur M. Phillips, Donald R. Brockway, E. O. Rogers, Aug. 49, 15.
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Biological effects of freezing, Lela V. Barton, May 49, 13.
Comparative study of lipids in whale carcasses of Arctic and non-Arctic fish, Chas G. Wilber, Micheal Del Pomo, May 50, 3.
Contribution to the biology of the king crab, M. Marvin Wallace, et al, Jan. 50, 33.
Golden Bear to the rescue, Stuart Alton, June 49, 15.
Malaya's freshwater fish plan, June 49, 9.
Marine biologist compiles new oyster bibliography, Feb. 50, 25.
Method of collecting the plankton while the boat is in motion, Tadashi Tamura, Dec. 49, 25.
Mussel resources of the North Atlantic regions. Part II. Observations on the biology and the methods of collecting and processing the mussel, Leslie W. Scattergood, Clyde C. Taylor, Feb. 50, 5.
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Rainfall of fish, J. Hedgepath, Apr. 50, 25.
Seagoing laboratory, Apr. 50, 9.
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Vitamin A in seals, K. Rodahl, A. W. Davies, Mar. 50, 11.
Whale marketing program, Nov. 49, 11.
Whaling investigation, Gordon C. Pike, Jan. 50, 29.

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Development of markets for products of the fisheries, Ralph Russell, July 48, 25.
Effect of international programs and developments on our commercial fisheries, A. W. Anderson, July 48, 5.
Fisheries Institute campaign to aid producers, Frances Smith, Feb. 50, 13.
Fishery education, Richard T. Whiteleather, July 48, 21.
Fishery motion pictures, Aug. 48, 17.
Fish fry for the small fry, Clarence R. Lucas, Aug. 50, 1.
Growing mechanization of fishing necessitates training schools, July 50, 1.
Information sources for students of commercial fisheries, R. Paul Elliott, July 50, 17.
New School of Fisheries building at University of Washington, Jan. 50, 5.
"Retailing Fish", a new movie, May 48, 5.
Waterfront course at Portland High prepares boys for fishing, July 50, 19.
What the Home Economists of the U. S. Fish and Wildlife Service are doing to increase the use of fishery products, Rose G. Kerr, Dec. 49, 13.

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Application of electro-physiological effect on fishing, C. Kreutzer, Herbert Peglow, May 50, 3.
Electric barrier impracticable, E. J. Ferguson Wood, May 50, 21.

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Australians like shark steaks, Mar. 50, 5.
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Earliest record (ca 195 A.D.) of fishing with the hand, E. W. Gudger, Feb. 49, 1.
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Hawks of the fishing fleet, Seymour E. Francis, July 49, 9.
Hook and liners now netting, Dec. 48, 19.
Methods of netting "Rough" fish, Apr. 50, 23.
Net load indicator, July 50, 15.
New scheme advanced to sneak up on fish schools, Apr. 50, 25.
Pearling again at Darwin, Oct. 48, 3.
Reef fishing in the Philippines, Agustine F. Umali, Herbert E. Warfel, Jan. 50, 17.
River fishing's a rugged business, Herbert J. Fisher, Mar. 50, 17.
Simultaneous fishing, loading in Norway, July 50, 11.
Sounder finds shoals, ring net gets fish, Apr. 49, 7.
Whaling as the Quinault Indians used to harpoon them, Dec. 49, 9.

Seining

British test sub detector on herring fishing banks, David Curnock, Sept.48, 15.
Cod fished in Norway with deep water purse seine, Dec. 49, 23.
Danger and difficulties of mackerel fishing, Dec. 48, 11.
Norwegians attract herring by light throwers, Jan. 49, 23.
Seining with electric lamp gets pilchards, M. Blackburn, Jan. 50, 17.

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Jurisich oyster - clam harvester, Apr. 49, 1.
New oyster dredging methods, H. Butler Flower, May 49, 7.
Shrimp handling and preservation, E. A. Fieger, et al, July 50, 5.

Trawling

Efficiency of the trawl, May. 50, 15.
Floating trawls developed for mid-water fishing, Jan. 50, 7.
Investigation into the destruction of grounds by otter trawling gear, K. S. Ketchen, Feb. 48, 9.
New Eureka deep-dragging technique extends trawl frontiers to 300 fathoms, May 49, 9.
New nets, new depths, new methods, Jan. 50, 3.
Otter trawl herring fishery, Albert L. Tester, Aug. 48, 3.

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Scofield drags below Eureka's deep draggers, May 50, 7.
Trawling for codfish to be ventured again in the Bering Sea, Feb. 48, 19.
Trawling for herring, May 49, 11.

Tuna

Australian tuna rated equal to Californian, Jan. 50, 5.
Canadian fishermen prepare to try floating set lines for albacore, Oct. 48, 5.
Fixed net fishing with lamp lures, Jan. 50, 15.
Japanese fished tuna with suspended set lines, Jan. 48, 19.
Japanese longline fishery for tuna, Sydney Shapiro, Sept. 50, 3.
New type of fishing reported in extensive use in Japan, Mar. 48, 27.
Scofield tries Japanese longlining on albacore, June 50, 21.
Tuna bait catching held function of specialists, Apr. 50, 9.

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Antibacterial properties of cod liver oil fatty acids, J. Solomides, Aug. 48, 5.
Drill sampling device for fish livers, F. B. Sanford, Lynne G. McKee, May 48, 17.
Extraction of oil from livers, A. J. V. Underwood, Aug. 48, 1.
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Fish liver oil industry, C. Butler, July 48, 11.
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Modification of the process of treatment of medical cod-liver oil, V. Kolchev, O. Shapiro, Mar. 48, 11.
Molecular distillation. Part I. Morris B. Jacobs, July 48, 19.
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Norway's cod-liver oil production, Dec. 48, 15.
Processing of shark livers, Mexico, Dec. 48, 9.
South African solexol vitamin plant, Jan. 48, 13.
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Transesterification and chromatographic treatment of fish liver oil as a means of concentrating vitamin A, M. L. Karnovsky, W. S. Rapson, N. J. Van Rensburg, May 48, 17.
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Vitamin discovery, Walter Russel Trent, May 48, 13.

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Semicontinuous deodorization of fats, A. E. Bailey, July 49, 5.

Drying

Biological examination of the influence of drying on the nutritive value of the nitrogen containing substance in feed and foodstuffs, G. Zimmerman, Jan. 49, 13.
Efficient operation of drying plant. Part I, Leo Walter, Aug. 50, 11.
High vac belt dryer improves products, cuts costs, E. G. Hellier, Dec. 49, 19.
Low temperature air-lift fish meal drying, Aug. 48, 9.

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Fatty acid distillation, May 48, 7.
How to improve quality of inedible fats, John P. Harris, July 48, 17.
Preparation of vitamin oils from salmon cannery offal by the alkali digestion process, Chas. Butler, David Miyauchi, Mar. 48, 25.
Processing edible fats, Warren H. Goss, Feb. 49, 23.
Refining seal oil in South Africa, Apr. 48, 19.

Fish solubles

Condensed fish solubles, Jan. 50, 31.
Fish solubles quality rating commands technical interest, Dec. 49, 1.
Practical importance of quality in condensed fish solubles, Oct. 49, 15.
Process of treating fish press water, James K. Gunther, Louis Sair, Aug. 49, 23.
Relationship of nutritive value of condensed fish solubles to quality of raw material, S. Lassen, E. K. Bacon, H. J. Dunn, Aug. 49, 11.
Sharples-Lassen stickwater process announced by Sharples Corp, Apr. 49, 11.
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There's good hard cash in stickwater, June 50, 21.

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Cholesterol from fish meal, S. A. Beatty, July 48, 1.
Converting problems to profits, Apr. 49, 15.
Fish byproducts, Franklin Kidd, July 50, 19.
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Modern byproduct plant, Oct. 49, 9.
New Gloucester byproducts plant, Feb. 50, 23.
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Oil and meal developments, F. B. Sanford, June 50, 23.
Poultry feed makers pay high prices for enriching seafood meal, Fletcher V. Booraem, Dec. 49, 11.
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Processing offal of fish, June 49, 21.
Rendering, Frank C. Vibrans, Mar. 50, 15.
Seldovia fish waste utilized, Mar. 49, 9.
South America - a fish meal factor? E. Wilson Lockwood, Sept. 49, 7.
South America offers golden opportunity, John Robas, Nov. 49, 5.
Stabilize supply, J. T. Corbett, Sept. 49, 23.
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West coast byproducts plant, Feb. 50, 1.
We visit one of the East's most modern byproducts plants, June 50, 23.

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Effects of methods of processing on the nutritive value of herring meals, D. R. Clandinin, Dec. 48, 17.

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Effects of methods of processing on the nutritive value of herring meals, D. R. Clandinin, Apr. 49, 13.
Hygroscopicity of fish meal and its changes according to storage conditions, V. Kolchev, Mar. 48, 11.
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Mechanics of solvent extraction, Geo. Karnofsky, Feb. 50, 5.
Review of operations in several solvent plants, Sept. 48, 1.
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Amino acids in fishery products. I. Catherine P. Deas, H. L. A. Tarr, Feb. 48, 9.
Amino acids in fishery products. II. Catherine Deas, Phyllis W. Ney, H. L. A. Tarr, Mar. 49, 13.
Composition of shark meal, Sydney P. Marshall, Geo. F. Davis, Jan. 49, 21.
Detection of chickens laying "fishy" eggs, J. H. Vondell, May 48, 1.
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Effect on hatchability of fish meal fed to hens deficient in the unidentified hatchability factor, Russel G. Lindstrom, et al, Nov. 49, 13.
Evaluation of the nutritional value of fish meal and meat meals, B. E. March, D. Stupich, Jacob Billy, Jan. 50, 7.
Feed control work, F. W. Quackenbush, Jan. 49, 13.
Feeding value of fish meal and fish solubles in poultry and livestock feeds, H. J. Almquist, Aug. 49, 9.
Fishery byproducts in feed formulation, Lyman Peck, Aug. 49, 11.
Fish products for growing, fattening pigs, Damon Catron, C. C. Culbertson, P. S. Shearer, Mar. 48, 17.
Formula for swine rations, C. M. Vestal, Feb. 48, 13.
Methionine, choline, betaine and fish products in simplified ration, D. H. Mishler, C. W. Carrick, S. M. Hauge, Apr. 49, 17.
Relative requirement and source of vitamin B_{12} for turkeys and chickens during the later stages of growth, Robert J. Lillie, et al, Nov. 49, 5.
Some studies on the feeding value of fish meal, W. B. Lanham, Jr., H. W. Nilson, Mar. 48, 25.
Soybean oil meal for swine, Ralph C. Holder, Jan. 49, 3.
Supplements for soyabean meal in turkey diets, H. R. Bird, S. J. Marsden, W. L. Kellog, Mar. 48, 25.
Technological studies of the starfish. II. Chemical composition, Chas. F. Lee, Aug. 48, 21.
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Alfalfa-fish solubles for pigs, J. T. Krider, D. E. Becker, W. E. Carroll, July 48, 3.
Condensed fish solubles as a supplement for corn and soybean oil meal chick rations, D. H. Mishler, C. W. Carrick, S. M. Hauge, Aug. 48, 7.

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Feeding value of fish meal and fish solubles in poultry and livestock feeds, H. J. Almquist, Sept. 49, 19.
Fish solubles quality rating commands technical interest, Dec. 49, 1.
Preliminary study on the value of condensed fish solubles for turkey poults, H. L. German, et al, Apr. 48, 5.
Relationship of nutritive value of condensed fish solubles to quality of raw material; S. Lassen, E. K. Bacon, H. J. Dunn, Aug. 49, 11.

Oil and lipids in meal

Chemical studies of lipoid extracts from menhaden fish meal, H. F. Kraybill, H. W. Nilson, June 48, 5.
Fat in fish meal, May 48, 15.
Fat in fish meal, M. E. Stansby, Mar. 49, 9.
Feeding studies with lipoid extracts from menhaden fish meal, H. F. Kraybill, H. W. Nilson, June 48, 17.

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Biological examination of the influence of drying on the nutritive value of the nitrogen containing substance in feed and foodstuffs, G. Zimmermann, Jan. 49, 13.
Effects of methods of processing on the nutritive value of herring meals, D. R. Clandinin, Dec. 48, 17.
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Influence of heat processing on the functional and nutritive properties of protein, Daniel Melnick, Bernard L. Oser, May 49, 11.
Rate of digestion of heat processed proteins and their biologic value, Dec. 49, 15.

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Amino acid composition of fishery products. II, Phyllis Ney, Catherine P. Deas, H. L. A. Tarr, Sept. 50, 11.
Effects of fishing on stocks of halibut in the Pacific, W. F. Thompson, Aug. 50, 21.
Gray sole - of the family of flatfishes, Dec. 49, 7.
Halibut fishing in British Columbia, Canada, Aug. 48, 17.
Immediate post mortem changes in trawled fish, C. L. Cutting, Nov. 49, 17.
Stabilization of vitamin A in halibut liver oil with nordihydroguaiaretic acid (NDGA), John A. Dassow, Maurice E. Stansby, Dec. 49, 1.
"Tailored" halibut cuts feature 1949 operations, Dec. 49, 17.
Vitamin A in the intestine (pyloric caeca) of halibut, J. Glover, R. A. Morton, Nov. 48, 11.

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Browning and the fluorescence of evaporated milk, N. P. Tarassuk, H. D. Simonson, June 50, 21.
Browning reaction of proteins with glucose, Ali Mohammad, et al, Apr. 50, 21.
Changes in the electrical resistance of muscle associated with the onset of rigor mortis, A. N. Rowan, E. C. Bate-Smith, Dec. 49, 15.

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Connective tissue - elasticity of connective tissue and quick determination of connective tissue in meat, E. C. Bate-Smith, Dec. 49, 3.
Connective tissue - elasticity of connective tissue and quick determination of connective tissue in meat, E. C. Bate-Smith, Dec. 49, 15.
Correlation of browning, fluorescence, and amino nitrogen change with destruction of methionine by autoclaving with glucose, W. D. Graham, et al, May 50, 21.
Lipoprotein complexes, Franklin Kidd, Aug. 50, 11.
Maillard reaction in fish products, H. L. A. Tarr, Sept. 50, 13.
Observation on the pH and related properties of meat, E. C. Bate-Smith, Sept. 48, 1.
Proteins in fish muscle. II. Colorimetric estimation of fish muscle protein, J. M. Snow, June 50, 5.
Protein in fish muscle. III. Denaturation of myosin by freezing, J. M. Snow, June 50, 5.
Psychrometric behavior in closed packages, Max F. Mueller, Nov. 49, 19.
Role of amino acids in the deterioration of foods. The browning reaction, C. H. Lea, Aug. 50, 7.

Drying

Drying frozen biological material, O. Chishoff, Apr. 50, 25.
Efficient operation of drying plant. Part I, Leo Walter, Aug. 50, 11.
Nomograph for drying calculations, H. Fougere, July 50, 9.
Physics of the low temperature vacuum drying process. Part I, A. J. Ede, Mar. 50, 3.

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Biological effects of freezing, Lela V. Barton, May 49, 13.
Freezing concentration of fruit juices, J. F. Kefford, Oct. 49, 19.
Influence of freezing on the activity of enzymes, F. Kiermeier, Oct. 49, 7.

General and miscellaneous

Aluminum in the food industry, J. M. Bryan, Aug. 48, 3.
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Chlordane is superior to DDT for controlling insect pests, Apr. 48, 13.
Digest of laboratory safety practices, James S. Sweely, Apr. 50, 9.
Fisheries technologists urge more fundamental research by government agencies, June 50, 15.
Food investigation 1940-1946, Oct. 48, 7.
Gas evolution from supersaturated liquids, E. C. Marboe, Oct. 49, 15.
Seasonal industry profits from production engineering, G. C. Scott, June 49, 19.
State research in Denmark, Mogens Jul, Mar. 48, 19.
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Treatment of preserves and food research, Feb. 48, 23.

Odors and deodorizing

Air purification and deodorization by use of activated carbon, F. H. Munkelt, Dec. 48, 13.
Chemical evaluation of odor intensity, Lionel Farber, Mar. 50, 25.
Mustiness in foods, L. B. Jensen, Aug. 48, 25.
Odour and oxidisability, R. W. Moncrief, Dec. 48, 19.

Odors and deodorizing (Cont'd)

Organoleptic evaluation of foods, L. C. Cartwright, Robert A. Nanz, Nov. 48, 5.
Theories on odors, Chas. E. Pressler, May 48, 19.

Processing

Chemical engineering unit operations, R. L. Pigford, et al, May 50, 1.
Eire's first hydrogenation plant, Dec. 48, 13.
"How" of deaeration, Horace L. Smith, Jr., Apr. 50, 3.
Ion exchangers in food processes, A. B. Windler, May 49, 7.
Low temperature hydrolysis of commercial proteins, J. Edward Bird, Lewis J. Miner, Apr. 48, 3.
Pressure hydrolysis of proteins, Lloyd A. Hall, June 49, 11.
Proteins in fish muscle. I. Extraction of protein factors in fresh fish, W. J. Dyer, H. V. French, J. M. Snow, June 50, 5.
Theory of solvent extraction, Geo. Karnofsky, Jan. 50, 13.

FREEZING (see FROZEN FISH)

FRENCH FISHERIES (see EUROPEAN FISHERIES - France)

FRESH FISH (see HANDLING FRESH FISH)

FRESHNESS OF FISH

Freshness and quality

Amino acid impairment in casein heated with glucose, A. R. Patton, E. G. Hull, E. M. Foreman, Sept. 48, 1.
Care and preservation of fish as food. (B) Some bacteriological aspects of handling, processing and distribution of fish, J. M. Shewan, Jan. 50, 1.
Consumer demands quality in frozen fishery products, Gerald A. Fitzgerald, July 48, 25.
Effect of fish acidity on bacterial numbers and trimethylamine in spoiling fish, H. L. A. Tarr, Phyllis W. Ney, Aug. 49, 15.
Freezing and cold storage of whitefish, G. A. Reay, Nov. 49, 11.
Further studies on the bacteriological reduction of nitrite in fish during spoilage, W. J. Dyer, C. H. Castell, Jan. 50, 9.
Immediate post mortem changes in trawled fish, C. L. Cutting, Nov. 49, 17.
Influence of rate of freezing, storage temperature and freshness of raw material on the quality of frozen fish, Olav Notevarp, Eirik Heen, May 49, 19.
Mustiness in foods, L. B. Jensen, Aug. 48, 25.
Palatability changes in stored cod fillets, F. E. Dyer, W. J. Dyer, Apr. 50, 13.
Refrigeration temperatures and keeping time of fresh fish, C. H. Castell, Apr. 49, 17.
Report of decomposition in fish products, Fred Hillig, Dec. 49, 17.
Some technological aspects of the fresh and frozen seafood industry, Harry R. Beard, Sept. 50, 17.
Spoilage of fresh fish and its control, Geo. A. Reay, May 49, 3.
Whalemeat, Franklin Kidd, Jan. 50, 1.

Freshness tests - bacterial counts

Preliminary study of total bacterial plate count method for fishery products, R. Paul Elliott, Apr. 49, 1.
Relation of bacterial count to quality of cod fillets, C. H. Castell, et al, Apr. 49, 15.

Freshness tests, general and miscellaneous

Changes in the electrical resistance of muscle associated with the onset of rigor mortis, A. N. Rowan, E. C. Bates-Smith, Dec. 49, 15.
Chemical evaluation of odor intensity, Lionel Farber, Mar. 50, 25.
Comparison of chemical tests of the quality of fish, G. J. Sigurdsson, Feb. 48, 27.
Control of fish quality by fluorescence, G. D. Leskov, Aug. 49, 23.
Luminescence analysis for determination of quality of fresh or cooked fish, A. A. Adamova, S. E. Spektor, July 48, 31.
Microanalytical method for the volatile fatty acids, Simon Black, Jan. 50, 13.
On the relation between the freshness of fish meat and the change of electric resistance (preliminary report), K. Yamada, E. Kitano, May 49, 23.
Review of methods for determining decomposition in fishery products, Andrew M. Allison, Aug. 49, 23.
Simplified test on the freshness of fish meat. (1) An application of Walkiewicz's method for measuring the freshness of whale meat, K. Amano, H. Utiyama, July 49, 11.

Indole

Indole in shrimp, oysters and crabmeat. Tentative analytical method, May 48, 17.
Report on decomposition in shellfish. Indole in shrimp, oysters and crabmeat, R. E. Dugan, Nov. 48, 15.

Freshness tests - pH

On the use of pH measurements for determining freshness of bad fillets, Mog Kondrup, Mar. 49, 23.
On the use of pH measurements for determining the freshness of cod fillets, Mog Kondrup, May 49, 23.
pH data on Pacific oysters, R. B. Anderson, C. W. Betzold, W. J. Carr, Mar. 50, 9.
Preliminary study of correlation of pH and quality of shucked Pacific oysters, Frank T. Piskur, Jan. 48, 1.
Some data on pH and freshness of shucked eastern oysters, S. R. Pottinger, Feb. 49, 23.

Volatile bases

Effect of nitrite on reduction of trimethylamine oxide in cod fillets, C. H. Castell, June 49, 3.
Influence of trimethylamine oxide on the bacterial reduction of redox indicators, C. H. Castell, June 50, 21.
Note on the colorimetric estimation of trimethylamine, W. J. Dyer, June 50, 21.
Some aspects of trimethylamine formation in swordfish, David W. Anderson, Jr., Carl R. Fellers, Nov. 49, 3.
Some vapor pressures and the critical constants of trimethylamine, H. O. Day, et al, July 50, 25.
Studies of fish spoilage - A comparative study of certain analytical methods of the estimation of total volatile base and trimethylamine in Indian fish, R. Venkataraman, S. T. Chari, July 50, 1.

FROZEN FISH, GENERAL

Freezing fish at sea

Freezing fish at sea, J. M. Lemon, C. B. Carlson, Feb. 48, 21.
Freezing fish at sea for later thawing, processing and freezing ashore, J. F. Puncochar, Sept. 49, 1.
Freezing on fishing grounds, July 50, 9.

Freezing particular species of fish

Freezing and canning king crab, John A. Dassow, Sept. 50, 13.
Freezing of shrimp, Aug. 49, 7.
Frozen oysters, Clifford F. Evers, June 50, 5.
Loggerhead turtles being frozen at Plant City, Florida, Jan. 50, 5.
New item to the fore - fantail breaded shrimp, May 50, 11.
Shrimp handling and preservation, E. A. Fieger, et al, July 50, 5.
Vacuum packed frozen crabmeat in 5 lb. tins, June 50, 11.
White fish for quick freezing, Mar. 49, 15.

Frozen fish industry by geographical areas

Aspects of the German quick freezing industry, P. H. Simonovsky, Jan. 48, 7.
Developments in Spain's fishing industry, Feb. 48, 3.
Fishery industries of North America. Part I. Fresh and frozen fish, J. A. Lovern, July 48, 13.
Freezing and cold storage in the commercial fisheries, W. M. Zarotschenzeff, Sept. 49, 13.
Freezing progress in Germany, R. Gane, Mar. 48, 23.
Frozen foods in Germany from 1939-1945, R. Gane, Jan. 50, 11.
Organization and scope of Iceland's fish inspection service, Magnus Kr. Magnusson, Sept. 50, 17.
Trends of refrigeration in Great Britain, W. R. Woolrich, Jan. 50, 19.

General and miscellaneous

Bibliography of the preservation of fishery products by freezing, Dorris Bucher, Martin Heerdt, Jr., Kathryn Osterhaug, Jan. 48, 7. Part II, John Dassow, May 50, 23.
Biological effects of freezing, Lela V. Barton, May 49, 13.
Canning of frozen salmon, Aug. 48, 1.
Complete freezing of fish flesh, II. V. Mahadevan, Neal M. Carter, June 50, 13.
Consumer demands quality in frozen fishery products, Gerald A. Fitzgerald, July 48, 25.
Effect of 40 years frozen storage on the quality of beef, J. M. Ramsbottom, et al, Feb. 48, 1.
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Low temperature insulation, S. H. W. Richards, Feb. 48, 11.
Mechanical refrigeration effective for halibut, July 50, 3.
New freezer unit installed, Feb. 50, 17.
Practical aspects of food freezing, A. R. Carlson, July 50, 9.
Present trends and future developments in the technology of fish, J. A. Lovern, Feb. 48, 1.
Quick freezing of fish. Part I, Aug. 50, 5.
Some aspects of future consumption of fresh and frozen fishery products, R. A. Kahn, Sept. 49, 19.
Standards for quick frozen fish, Mar. 49, 11.
Storage of frozen seafoods, Harry R. Beard, May 50, 7.
These charts quickly analyze dielectric heating, T. P. Kinn, May 49, 17.
Ultra rapid cooling preserves life, B. J. Luyet, Feb. 49, 15.

Transportation

Frozen food transportation and distribution, A. L. Reneau, Feb. 50, 1.
Refrigerated shipment of frozen seafood and handling during marketing, H. R. Beard, July 50, 5.
Truck-trailer industry moves to keep abreast frozen food progress, J. B. Hulse, Jan. 48, 5.

FROZEN FISH, CHANGES DURING FREEZING AND COLD STORAGE

Cold storage

Bacteriology of shrimp, V. Effect of peeling, glazing and storage temperature on bacteria in frozen shrimp, Doris Holmes, C. S. McCleskey, Apr. 50, 7.
Cold storage of sprats, A. Banks, Nov. 49, 17.
Experiments on the storage of frozen shrimp, O. C. Young, D. H. Taylor, Aug. 48, 11.
Notes on mixed storage of foodstuffs, E. G. Hall, Apr. 48, 11.
Odor removal studies in refrigerated storage, M. Uota, R. M. Smock, May. 48, 1.
Recording color changes in frozen pink salmon, John A. Dassow, Maurice E. Stansby, June 49, 11.
Storage of frozen seafoods, Harry R. Beard, May 50, 5 & 7.
Storing frozen fish, S. R. Pottinger, Mar. 48, 19.
Use of ascorbic acid in frozen fish products, Mar. 49, 9.

Freezing

Bacteriology of shrimp. III. Quantitative studies on frozen shrimp, Margaret Green, Apr. 50, 5.
B-complex vitamins in meat. II. The influence of different methods of thawing frozen steaks upon their palatability and vitamin content, Beulah D. Westerman, et al Feb. 50, 25.
Calculation of the rate of freezing and thawing of foodstuffs, A. J. Ede, Aug. 49, 19.
Cell puncture theory " punctured" by latest research on ice crystal formation, Apr. 48, 11.
Complete freezing of fish flesh II, V. Mahadevan, Neal M. Carter, June 50, 13.
Effect of expansion on foods and containers due to freezing action, W. J. Finnegan, Jan. 50, 11.
Effect of freezing and thawing of muscular tissue, E. H. Callow, Dec. 49, 19.
Factors affecting the freezing rate of meats, J. M. Ramsbottom, et al, Apr. 50, 13.
Freezing of shrimp, Aug. 49, 7.
Influence of freezing on the activity of enzymes, F. Kiermeier, Oct. 49, 7.
Protein in fish muscle. III. Denaturation of myosin by freezing, J. M. Snow, June 50, 5.
Ultra rapid cooling preserves life, B. J. Luyet, Feb. 49, 15.

General

Brining of fish fillets, Peter Hemmingsen, May 50, 7.
Can fish be frozen aboard vessel, thawed, filleted and refrozen ashore? M. E. Stansby, J. A. Dassow, June 48, 1.
Care and preservation of fish as food. (B) Some bacteriological aspects of handling, processing, and distribution of fish, J. M. Shewan, Jan. 50, 1.
Care and preservation of fish as food. (c) Trends and developments in fish technology, C. L. Cutting, Jan. 50, 1.
Freezing and canning king crab, John A. Dassow, Sept. 50, 13.
Freezing and cold storage, Franklin Kidd, Aug. 50, 13.
Freezing and cold storage of whitefish, G. A. Reay, Nov. 49, 11.
Freezing and storage of fish, A. Banks, Aug. 48, 21.
Freezing fish at sea for later thawing; processing and freezing ashore, Joseph F. Puncochar, Sept. 49, 1.
Frozen fish, S. R. Pottinger, Oct. 48, 11.
Frozen food industry, Clifford F. Evers, Apr. 49, 11.
Influence of rate of freezing, storage temperature and freshness of raw material on the quality of frozen fish, Olav Notevorp, Eirik Heen, May 49, 19.
Present trends and future developments in the technology of fish, J. A. Lovern, Feb. 48, 1.
Preservation of fish, May 49, 13.

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Some technological aspects of the fresh and frozen seafood industry, Harry R. Beard, Sept. 50, 17.
Torry research report for 1947, Franklin Kidd, Jan. 50, 7.
What effects do cooking and packaging have on frozen boiled shrimp? Harvey Lewis, Jan. 48, 5; July 48, 19.

FROZEN FISH, PACKAGING

General and miscellaneous

Bacteriology of food package material, L. C. Barail, Feb. 48, 3.
Effect of expansion of foods and containers due to freezing action, W. J. Finnegan, Jan. 50, 11.
Frozen food industry, Clifford F. Evers, Apr. 49, 11.
Fundamentals of package function, L. W. Elder, Jan. 50, 17.
Meat pre-packaging: Where does it stand? Apr. 50, 7.
Packaging frozen foods, G. H. Sullivan, July 48, 21.
Packaging solves problem, Jan. 50, 13.
Perfected plant - compelling package, Apr. 50, 15.
Psychrometric behavior in closed packages, Max F. Mueller, Nov. 49, 19.
Union Pacific installs container engineering service, Warren R. White, Apr. 48, 19.
Weight loss and the law, Feb. 48, 11.

Machines for packaging

Basic mechanisms of packaging machinery, S. Rappaport, Apr. 50, 25.
Machines for packaging fish, Jan. 50, 19.
Machine wraps meats, delicatessen items on card, Aug. 49, 7.
New packing process has improved features, Jan. 49, 3.

Packaging materials

Aluminum foil. I. Properties for packaging, J. O. Edwards, D. B. Strohm, June 48, 19.
Aluminum foil. III. Performance with packaged products, J. D. Edwards, D. B. Strohm, July 48, 9.
Polyethelene new packaging prospect, Richard W. Lahey, Sept. 48, 9.
Proofing of paper, M. L. Downs, Apr. 48, 17.

Packaging of fish

Conditions affecting the quality of quick frozen shrimp, E. A. Fieger, C. W. DuBois, Mar. 49, 17.
Freezing and canning king crab, John A. Dassow, Sept. 50, 13.
Frozen fish, S. R. Pottinger, Oct. 48, 11.
New aluminum fish package developed, July 50, 17.
Packages that sell frozen fish, J. M. Lemon, May 48, 15.
Packaging frozen fishery products, S. R. Pottinger, Aug. 49, 21.
Problems in freezing and packaging oysters, Mar. 49, 7.
Shrimp handling and preservation, E. A. Fieger, et al, July 50, 5.
Speed and quality engineered into fish freezing operation, John V. Ziemba, Mar. 49, 9.
Storage of frozen seafoods, Harry R. Beard, May 50, 5 & 7.
Storing frozen fish, S. R. Pottinger, Mar. 48, 19.
"Tailored" halibut cuts feature 1949 operations, Dec. 49, 17.
Technological aspects of the fresh and frozen seafood industry, Harry R. Beard, Sept. 50, 17.

Packaging of fish (Cont'd)

Uniformity is necessary in packaging frozen fish, Leo Young, Feb. 50, 21.
What effects have cooking time and packaging on frozen shrimp? Harvey Lewis, July 48, 19.
Wraps fish, fruit, whole fowl in vacuumized pliofilm, Jan. 48, 11.

Special packaging methods

How nitrogen protects the quality of foods, W. S. Walker, Dec. 49, 19.
Fiberglas-insulated shipping containers for frozen shrimps, July 49, 1.
Lock-tab for frozen foods, Apr. 49, 19.
New uses for desiccants, Roger A. Lovett, Apr. 49, 9.
Pectinate films, W. Dayton Maclay, Harry S. Owens, Dec. 48, 17.

FROZEN FISH, PROCESSING

Brining equipment

Apparatus for dipping fish fillets or steaks, A. W. Lantz, Aug. 50, 17.
Brining of fish fillets, Peter Hemmingsen, May 50, 7.
New type fish briner, Mar. 49, 11.
Universal's fillet briner, July 49, 9.

Developments in specific geographical areas

Canada tests fish freezing train, July 48, 7.
Fishery industries of N. America. Part I. Fresh and frozen fish, J. A. Lovern, July 48, 13.
Frozen foods in Germany from 1939-1945, R. Gane, Jan. 50, 11.
New freezer is tested by company in California, June 48, 19.
Quick freezing plant for fish and other foodstuffs, Sir Charles Dennistoun Burney, Jan. 49, 19.

Freezing aboard vessels

Can fish be frozen aboard vessel thawed, filleted and refrozen ashore? M. E. Stansby, J. A. Dassow, June 48, 1.
Freezing fish at sea for later thawing; processing and freezing ashore, J. F. Puncochar, Sept. 49, 1.
Prying open the gate to the great field of small craft refrigeration, Aug. 49, 13.
Recommended practice for mechanical refrigeration installations on shipboard. Proposed standard of American Society of Refrigerating Engineers, W. L. Keller, Feb. 49, 7.
Refrigeration in fishing vessels, E. W. Hicks, Feb. 49, 15.
S. S. Pacific Explorer. Part III. Below deck arrangements and refrigeration equipment, Carl B. Carlson, Mar. 49, 11.
Tuna boat refrigeration, H. M. Hendrickson, Aug. 50, 19.

Freezing equipment

Distant action thermometer for fish products, J. Marshak, Mar. 48, 11.
Some basic concepts for the operation of the freon-12 refrigeration system, Geo. H. Walker, Nov. 49, 19.
Speed and quality engineered into fish freezing operation, John V. Ziemba, Mar. 49, 9.

Freezing particular species of fish

Freezing of shrimp, Aug. 49, 7.
Freezing and canning king crab, John A. Dassow, Sept. 50, 13.
Notes on freezing shrimp, J. M. Lemon, June 48, 13.
Problems in freezing and packaging oysters, Mar. 49, 7.
Shrimp keep better if alkali treated, July 50, 13.
What effects have cooking time and packaging on frozen shrimp? Harvey Lewis, July 48, 19.

General and miscellaneous

Care and preservation of fish as food. (c) Trends and developments in fish technology, C. L. Cutting, Jan. 50, 1.
Freezing and cold storage, Franklin Kidd, Aug. 50, 13.
Freezing and storage of fish, A. Banks, Aug. 48, 21.
Frozen fish, S. R. Pottinger, Oct. 48, 11.
Perfected plant - compelling package, Apr. 50, 15.
Quick freezing of fish. Part I. Aug. 50, 5.
Some technological aspects of the fresh and frozen seafood industry, Harry R. Beard, Sept. 50, 17.
Storage of frozen seafoods, Harry R. Beard, May 50, 5 & 7.
Torry research report for 1947, Franklin Kidd, Jan. 50, 7.

Special processing methods

Bacteria in precooked frozen foods, Jan. 49, 3.
How to test your air blast freezer, E. Lowe, G. S. Smith, O. H. Spaugh, Aug. 50, 11.
Quality control of frozen foods, Gerald A. Fitzgerald, Feb. 48, 15.
Storage life of whole and split rockfish fillets, M. E. Stansby, John Dassow, Dec. 49, 13.
Use of ascorbic acid in frozen fish products, Mar. 49, 9.
What causes ice formation in food freezer insulation? E. W. Comings, May 48, 7.

GEAR, FISHING

General and miscellaneous

Accurate fixes for fishermen, Mar. 50, 15.
Application of electro-physiological effect on fishing, Conradin Kreutzer, Herbert Peglow, May 50, 3.
David W. Taylor model basin, Aug. 48, 23.
Keeping live shrimp for bait, Sept, 49, 21.
"Ocean Harvest" is complete handbook for commercial fishermen, Feb. 48, 19.
River fishing is a rugged business, Herbert J. Fisher, Mar. 50, 17.
Stainless steel gear, Apr. 48, 9.

Lines

Grinnell rigs Gloucester boat with west coast halibut lines, John Bunker, Sept. 50, 21.
Inventive troller designs stainless steel line clamp, Jean Marie Fenander, Jan. 48, 7.
Japanese long-line fishery for tunas, Sidney Shapiro, Sept. 50, 3.
Stainless steel long-line gear proves successful, Sept. 49, 1.
Trotline construction, operation and maintenance (Chesapeake Bay type), E. Andrews, Sept. 48, 19.

Miscellaneous mechanical devices

Automatic fishing reels aid fishermen, Jan. 50, 29.
Capt. Guy Silva scores with mechanically lifted tuna pole designed to reduce hard labor, Apr. 48, 5.

Miscellaneous mechanical devices (Cont'd)

Compressed gas dart propellent in swordfish gun, Jan. 50, 19.
Experimental fishing for red snapper. II. Use of mechanical reels, R. O. Smith, Aug. 48, 23.
Mechanical fisherman, June 48, 3.
Mechanical fish hook baiter, July 48, 29.
Norwegians develop new electric whale gun, Nov. 49, 15.
Test dynamometer for registering quantity of fish in net, Jan. 50, 21.

Netting material

Nylock: Spider webb of sea, Ed. B. Sturges, Apr. 50, 13.
Nylon netting versus cotton, Aug. 50, 19.
Test nylon in Norway, June 50, 13.

Preservation of gear

Care and preparation of fish nets and twine, B. Farrar, Mar. 50, 7.
Development of fish net preservatives, Frank E. Firth, Aug. 48, 21.
Resistance of resin-impregnated cotton fabrics to microorganisms, W. L. White, R. G. H. Siu, Mar. 48, 9.

Seines, nets and traps

Biggest purse seine, Oct. 48, 19.
Experimental fishing for red snapper. I. Use of hoop nets, Robt. O. Smith, Aug. 48, 11.
Net load indicator, July 50, 15.
Nets and netting - gill nets, Apr. 50, 15.
Net and netting - seine nets and their use on lakes and ocean waters, Dec. 49, 5.
New net idea announced, Peter Siam, Sept. 49, 3.
Norwegian net floats and buoys, Aug. 50, 15.
Nylon and linen seines 10 strips deep to be tried on mid-ocean tuna, Aug. 50, 21.
Rigging scows. Essential tools for Southeastern Alaska floating salmon traps, July 48, 7.
Small herring ring-netters are swelling Britian's fish fleet, Geoffrey C. Trout, Mar. 50, 5.
Trap nets, Feb. 50, 7.

Shellfish gear

Boundary Bay crabbers find advantage in monel crab pots, Apr. 50, 13.
Construction and rigging of shrimp trawls I, N. W. Edwards, June 50, 21.
Construction and rigging of shrimp trawls. Part II. General rules for making trawls, N. W. Edwards, July 50, 25.
Latest development in oyster dredges appear on the west coast, R. Paul Elliott, Dec. 48, 1.
Live-box hold features Furfiord's crab craft, Aug. 49, 21.
New shrimp net designed to release immature fish, Sept. 49, 5.
New type of net for shrimpers proves instant success, June 48, 3.
Protect short lobsters in lobster areas, D. G. Wilder, Aug. 48, 5.
Rhode Island quahog dredgers using "jet" equipment, Feb. 50, 25.

Trawling

Addition to the trawler equipment, Feb. 49, 19.
Cod-end protectors insure no rotting and long life protection, Sept. 49, 21.
Deep gear, July 49, 7.

Trawling (Cont'd)

Floating trawls developed for mid-water fishing, Jan. 50, 7.
Kite rigs for otter trawl gear, R. T. Whiteleather, Oct. 48, 9.
Nets and netting - trawl nets are used on the Atlantic, Pacific and Gulf, Apr. 50, 9.
New cod-end protector, Oct. 49, 5.
New float for trawl nets invented in Sweden, Apr. 50, 3.
New nets - new depths - new methods, Jan. 50, 3.
New otter trawl rigging, H. N. Binns, et al, Feb. 48, 27.
Otter trawling: a general description of the otter trawl as made up and used on the Pacific coast of U. S., Robert K. Pederson, Oct. 48, 15.
Wooden trawl doors, Mar. 50, 3.

GRAYFISH (see SHARKS)

HADDOCK (see COD FAMILY)

HALIBUT (see FLATFISH)

HANDLING FRESH FISH (see also TRANSPORTATION; FRESHNESS OF FISH; SPOILAGE)

HANDLING OF FRESH FISH

Brining and washing

Apparatus for dipping fish fillets or steaks, A. W. Lantz, Aug. 50, 17.
Bacterial population of brining tanks in fish filleting plants, Jean C. Hartshorne, May 48, 11.
Brining of fish fillets, Peter Hemmingsen, May 50, 7.
Effect of mechanical washing of fish on the keeping quality of fillets prepared from them, H. L. A. Tarr, A. W. Lantz, June 50, 13.
New type fish briner, Mar. 49, 11.
Universal's fillet briner, July 49, 9.

Developments in specific geographical areas

Danish fishery products, Frode Bramsnes, Mar. 50, 17.
Fish and fish products. Developments in herring industry, Iceland, May 48, 13.
Fishery industries of N. America. Part I. Fresh and frozen fish, J. A. Lovern, July 48, 13.
Herring catch, products and prices, British Columbia, Canada, Apr. 48, 5.
Netherland herring fishery, Aug. 48, 13.
Organization and scope of Iceland's fish inspection service, Magnus Kr. Magnusson, Sept. 50, 17.
Perfected plant - compelling package, Apr. 50, 15.
Port of Blaine is planning for expansion of fishery, Apr. 50, 19.
Whale and herring catch and oil output, Norway, Jan. 49, 5.

Dressing and cutting

Aluminum filleting table, A. L. Wood, H. E. Power, Mar. 48, 1.
Fish scaler adapted from equipment for recovery of flesh from fish trimmings, A. W. Lantz, May 49, 13.
New fish skinning machine, Sept. 48, 7.
New type filleting machine, July 50, 1.
Storage life of whole and split rockfish fillets, M. E. Stansby, John Dassow, Dec. 49, 13.
"Tailored" halibut cuts feature 1949 operations, Dec. 49, 17.

General and miscellaneous

Bacteriology of food package materials, L. C. Barail, Feb. 48, 3.

General and miscellaneous (Cont'd)

Care and preservation of fish as food. (a) General introduction to technological problems of the fish industry, G. A. Reay, Jan. 50, 1.
Care and preservation of fish as food. (c) Trends and developments in fish technology, C. L. Cutting, Jan. 50, 1.
Grease resistance, C. G. Lavers, July 48, 7.
Meat pre-packaging, where does it stand? Apr. 50, 7.
New technics in commercial preservation of fish, Norman D. Jarvis, Hugo W. Nilson, Feb. 48, 25.
New use for lampreys, Mar. 48, 9.
Notes on the mixed storage of foodstuffs, E. G. Hall, Apr. 48, 11.
Some technological aspects of the fresh and frozen seafood industry, Harry R. Beard, Sept. 50, 17.
Torry research report for 1947, Franklin Kidd, Jan. 50, 7.
Weissich scores at Eureka with automatic boat to packer process, Sept. 48, 5.
Whalemeat, Franklin Kidd, Jan. 50, 1.

Hoists, unloading pumps and dock equipment

De-icing and weighing of fish, Jan. 50, 3.
New hydra-vac lift speeds fish direct from boat to cannery, Tom Cameron, Mar. 50, 13.
New pump brails fish at rate of 200 tons per hour, May 50, 17.
New Seattle fish docks, Apr. 50, 3.
Simultaneous fishing, loading in Norway, July 50, 11.
Unloading fish made easy, Feb. 48, 25.
Vacuum pump for unloading herring, Sept. 50, 9.

Icing and cooling

Care of trawler's fish, G. A. Reay, J. M. Shewan, Apr. 50, 23.
Changes in cooling and transportation technique suggested for the marketing of fresh "Fresh" fish, W. A. MacCallum, Sept. 49, 11.
Comparative value of germicidal ices for fish preservation, H. L. A. Tarr, Sept. 48, 13.
Cooling of fish in crushed ice, N. Osoling, Mar. 48, 11.
Cooling of trawler's fish in ice, C. L. Cutting, Nov. 49, 11.
Freezing and cold storage of whitefish, G. A. Reay, Nov. 49, 11.
Fresh fish in beds of crushed ice boosts sales of fish and meats, Sept. 49, 7.
Handling and storage of herrings, G. A. Reay, J. M. Shewan, Nov. 49, 7.
Investigation of the cooling rates of gutted fish stowed in schooners, W. A. MacCallum, et al, Jan. 50, 15.
Losses through the leaching by water from melting ice of soluble constituents in iced, gutted cod, W. J. Dyer, F. E. Dyer, Mar. 48, 21.
Mechanical refrigeration effective for halibut, July 50, 3.
Storage of haddock, B. E. Proctor, et al, June 50, 17.
Stowing ice aboard to insure prime fish cargoes, Aug. 50, 17.
Suggestions for handling trawler-caught fish, J. F. Puncochar, S. R. Pottinger,, June 48, 15.
Value of temperature close to freezing on the storage of fish, C. H. Castell, W. A. MacCallum, Sept. 50, 17.

Miscellaneous handling equipment

Drawings and parts lists for fish processing machines, Feb. 48, 5.
Electronic scale developed, Feb. 50, 19.
Equipment for recovery of waste fish flesh, A. W. Lantz, Feb. 48, 1.
Hydraulic fish handling system, Dec. 48, 15.
It recovers edible products from fish scrap, A. W. Lantz, May 49, 9.

Miscellaneous handling equipment (Cont'd)

Mechanization in the herring industry, Aug. 50, 9.
New type refrigeration unit, Jan. 48, 13.
Ultra-violet rays for detecting shell in picked crab meat, S. W. Roach, Dec. 49, 1.

Shellfish

Bacteriology of shrimp. I. Introduction and development of experimental procedures, Margaret Green. Apr. 50, 5.
Bacteriology of shrimp. II. Quantitative studies on freshly caught and iced shrimp, Margaret Green, Apr. 50, 5.
Conditions affecting the quality of quick frozen shrimp, E. A. Fieger, C. W. Du Boise, Mar. 49, 17.
Fresh and frozen shrimp in refrigerated storage, E. A. Fieger, Oct. 48, 19.
New machine for shrimp packers, Aug. 50, 17.
Oyster free liquor content depends upon cleaning method, William B. Lanham, et al, Apr. 48, 11.
Packing oysters in barrels, Dec. 49, 9.
Shrimp handling and preservation, E. A. Fieger, et al, July 50, 5.
Shrimp keep better if alkali treated, July 50, 13.
Shrimp peeling machine, Jan. 50, 23.
Shrimp sorting machine, A. W. Lantz, Dec. 49, 1.

Spoilage and preservation by cold

Control of fillet contamination in fish plants. Part II. Relationship between the initial contamination and the subsequent rate of spoilage, C. H. Castell, Apr. 50, 3.
Fish spoilage, Oct. 49, 13.
Immediate post mortem changes in trawled fish, C. L. Cutting, Nov. 49, 17.
Keeping time and quality of sea food fillets, C. H. Castell, July 48, 19.
Palatability changes in stored cod fillets, F. E. Dyer, W. J. Dyer, Apr. 50, 13.
Preservation of trawled stockfish, G. M. Dreosti, T. H. Mead, Sept. 50, 25.
Quality of iced fish, Franklin Kidd, Aug. 50, 1.
Refrigeration temperatures and keeping time of fresh fish, C. H. Castell, Apr. 49, 17.
Spoilage of fresh fish and its control, G. A. Reay, May 49, 3.
Spoilage rates at 37° and 32° F., C. H. Castell, Jan. 50, 23.

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Byproducts

Effects of methods of processing on the nutritive value of herring meals, D. R. Clandinin, Dec. 48, 17.
Effects of methods of processing on the nutritive value of herring meals, D. R. Clandinin, Apr. 49, 13.
Herring oil for margarine, Lyle A. Swain, Dec. 49, 5.
Scorch and ignition temperatures of herring meal, V. Mehadevan, Neal M. Carter, Mar. 49, 1.

Composition and freshness

Amino acid composition of fishery products (II), Phyllis Ney, et al, Sept. 50, 11.
Component acids of herring visceral fat, T. P. Hilditch, et al, July 48, 15.

Composition and freshness (Cont'd)

Fat content of Danish caught North Sea trawl herring 1947, Knud Nielsen, Apr. 49, 21.
Fat content of Danish caught North Sea trawl herring 1948, and Skagerrak herring 1949, A. Mygind, July 50, 7.
Immediate post mortem changes in trawled fish, C. L. Cutting, Nov. 49, 17.
Some factors affecting the oxidation of the fat of dehydrated herrings, A. Banks, July 50, 3.

Fishing methods

British test sub-detector on herring fishing banks, David Curnock, Sept. 48, 15.
Net load indicator, July 50, 15.
Otter trawl herring fishery, Albert L. Tester, Aug. 48, 3.
Small herring ring netters are swelling Britain's fish fleet, Geoffrey C. Trout, Mar. 50, 5.
Trawling for herring, May 49, 11.

General and miscellaneous

Alaska's herring industry makes impressive recovery, Jan. 49, 7.
Care and preservation of fish as food. (a) General introduction to technological problems of the fish industry, G. A. Reay, Jan. 50, 1.
Danish fishery products, Frode Bramsnes, Mar. 50, 17.
Newfoundland herring industry, Rupert Jackson, Apr. 49, 5.
Norway fishery developments, July 50, 19.
Torry research report for 1947, Franklin Kidd, Jan. 50, 7.

Preservation and processing

Freezing and cold storage, Franklin Kidd, Aug. 50, 13.
Handling and stowage of herrings, G. A. Reay, J. M. Shewan, Nov. 49, 7.
Herring canning in Germany, E. P. Sidaway, June 48, 5.
Herring products, A. W. Lantz, Jan. 48, 15.
Mechanization in herring industry, Aug. 50, 9.
New treatment for herring to end perennial problem of gluts, Aug. 48, 21.
Preparation of marinated herring, R. E. S. Homans, July 50, 9.
Recent experiments in the salt curing of herring, J. M. Shewan, Feb. 49, 7.
Vacuum pump for unloading herring, Sept. 50, 9.

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ICELAND (see EUROPEAN FISHERIES - (Iceland)

INSPECTION (see REGULATION AND INSPECTION)

JAPANESE FISHERIES (see ASIATIC FISHERIES - (Japan)

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LITERATURE SEARCH (see PERIODICALS AND BOOKS)

LIVERS (see FISH LIVER OILS, MANUFACTURE OF; COMPOSITION, VITAMINS - Vitamin A in miscellaneous fish - Vitamin A in shark oils)

LOBSTERS

Advertising campaign to consumer promoted by the So. African Rock Lobster Association in newspaper and dealer helps, Sept. 49, 13.
Air shipment of frozen Pacific crab, Sept. 48, 23.
Air transport of fish, S. A. Beatty, July 48, 9.
Brine for crawfish canning, G. M. Dreosti, R. P. Van de Merwe, Nov. 48, 3.

LOBSTERS (Cont'd)

Can lobsters alive at east coast plant, June 50, 17.
Cuba's spiny lobster industry, Joseph L. Martinez, July 48, 27.
Development of crawfish industry, Tristan da Cunha, Oct. 48, 5.
Live lobsters flown from Mexican waters, Feb. 48, 25.
Lobster research - 3 years Florida tagging reveals interesting data, Verne O. Williams, Sept. 48, 13.
Lobster tail production in Union of So. Africa, June 50, 7.
Maine lobsters take air to market on air express, May 48, 1.
Protect short lobsters in market lobster areas, D. G. Wilder, Aug. 48, 5.
Review of the Southern California spiny lobster fishery, Robert C. Wilson, Aug. 48, 1.
Spiny lobsters - identification, world distribution and U. S. trade, Fenner A. Chace, Jr., William H. Dumont, Nov. 49, 15.
Spiny lobster industry of the Caribbean and Florida, F. G. Walton Smith, Aug. 49, 9.
Torry Research Report 1947, Franklin Kidd, Jan. 50, 7.

MACKEREL

Comparison of chemical changes in mackerel tissues treated by ionizing radiation, J. T. R. Nickerson, et al. Aug. 50, 13.
Curb mackerel fillet rancidity with new dip and coat technic, L. E. Stoloff, et al, Dec. 48, 3.
Dangers and difficulties of mackerel fishing, Dec. 48, 11.
Fish canning on the New England coast, Micheal Vucassovich, Apr. 48, 17.
North Atlantic tuna, Donald S. Ross, May 49, 15.

MARINE PLANT PRODUCTS

Miscellaneous

Chemical composition of marine algae, Margaret G. Macpherson, E. Gordon Young, Jan. 50, 31.
Research on fat conversion from plankton, Dec. 49, 15.
Three-element colloid makes better low-solid gels, G. L. Baker, et al, July 49, 13.

Products from seaweed

Agar industry in No. Carolina, Jan. 48, 1.
Alginates for the food industry, Nov. 49, 3.
Alginates in cosmetics, S. P. Jannaway, July 49, 21.
Alginates in drugs and cosmetics, M. A. Lesser, Mar. 48, 17.
Australian agar-agar production, Aug. 48, 11.
Britain's new agar industry, Aug. 49, 5.
Colorimetric method for the estimation of alginic acid in seaweed specimens, E. G. V. Percival, A. G. Ross, Apr. 49, 11.
Effect of processing and storage on the quality of gelose from Irish moss (Chondrus crispus), D. MacDougall, July, 48, 11.
Gelatine products from seaweed, Neal Carter, Mar. 50, 25.
How seaweed can help to feed, clothe and house us, E. J. Ferguson Wood, Mar. 50, 19.
Hydrophilic colloids from seaweeds, C. L. Mantell, Aug. 49, 23.
Japs cash in on seaweed, Howard W. Seibert, Aug. 48, 13.
Methods for the routine estimation of mannitol, alginic acid and combined fucose in seaweeds, M. C. Cameron, A. G. Ross, E. G. V. Percival, Oct. 48, 3.
New Zealand factor in agar market, Feb. 48, 13.
Potential seaweed industry for Scotland, Sept. 48, 5.
Seaplant extractives recovered by new technics, John Godson, Sept. 49, 7.

Products from seaweed (Cont'd)

Solution of Irish moss extractives by acidulation, Leonard Stoloff, Aug. 50, 21.
Strength measurements of agar gels, Leonard S. Stoloff, Nov. 48, 19.
Studies in the catalase of seaweeds, Mitsuzo Takagi, Dec. 49, 25.
Study of certain British seaweeds and their utilization in the preparation of agar, S. M. Marshall, L. Newton, A. P. Orr, May 50, 23.
Suspending power and viscosity of carrageenin, R. C. Rose, W. H. Cook, Mar. 50, 23.
Syneresis of agar gels, Leonard S. Stoloff, Nov. 48, 19.

Seaweed

Seasonal variation in chemical composition of some of the littoral seaweeds common to Scotland. Part II. Fucus serratus, Fucus vesiculosus, Fucus speralis and Pelvetia canaliculata, W. A. P. Black, Mar. 50, 23.
Seasonal variation in chemical constitution of some of the sublittoral seaweeds common to Scotland. I. Laminaria cloustoni, W. A. P. Black, Oct. 48, 11.
Seasonal variation in chemical constitution of some of the sublittoral seaweeds common to Scotland. II. Laminaria digitata, W. A. P. Black, Dec. 48, 5.
Seasonal variation of chemical constitution of some of the sublittoral seaweeds common to Scotland. III. Laminaria saccharince and Saccarhiza bulbasa, W. A. P. Black, Nov. 48, 7.
Seaweed research, June 48, 9.

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Advertising campaign to consumer promoted by the South African Rock Lobster Association in newspaper and dealer helps, Sept. 49, 13.
Fisheries Institute campaign to aid producers, Frances Smith, Feb. 50, 13.
Good packages sell fish, R. R. Smith, Aug. 48, 3.
Packaging solves problem, Jan. 50, 13.

General and miscellaneous

Agreement concerning purchase of Icelandic fish and fish products concluded with U. K., Sept. 48, 11.
Care and preservation of fish as food.(a) General introduction to technological problems of the fish industry, G. A. Reay, Jan. 50, 1.
Export pack, a survey of foreign port conditions shows why U. S. shipments are getting a bad name and how packaging can be improved, Gordon E. Bouton, Mar. 48, 1.
Fishery products imports on the increase, Leo Young, Jan. 48, 13.
Fish fry for small fry, Clarence R. Lucas, Aug. 50, 1.
Fish in school lunches, Margaret M. Morris, Nov. 49, 7.
Fresh, canned and quick frozen foods, Martin Hilby, Feb. 48, 5.
Gains for farmers, fisheries, Mar. 48, 21.
Measurement of food acceptance, E. C. Crocker, L. B. Sjostrom, Mar. 49, 15.
Rational method for grading food quality, R. P. Plank, Oct. 48, 15.
Some aspects of future consumption of fresh and frozen fishery products, Richard A. Kahn, Sept. 49, 19.
Suggestions for institutional purchasers of fishery products, Clarence R. Lucas, Aug. 50, 5.
"Tailored" halibut cuts feature 1949 operations, Dec. 49, 17.
U. S. per capita consumption of fishery products, Harry Sherr, May 49, 11.

Retailing and markets for fish

Air transport and the market possibilities of the midwest, Robert Ramspek, Jan. 50, 3.

Retailing and markets for fish (Cont'd)

Canadian fishery markets - review and outlook, July 49, 11.
Developing mid-west markets, Elihu Church, Jan. 50, 33.
Development of markets for products of the fisheries, Ralph Russell, July 48, 25.
Fish marketing in Colorado and the development of greater markets, Clarence R. Lucas, Oct. 48, 5.
Mexico good market for canned and dried fish, Aug. 48, 25.
New oyster season finds dealers striving to build new markets, Feb. 50, 17.
Planned marketing of fishery products, Leo Young, Sept. 49, 15.
Quarterly outlook for marketing fishery products, Apr. - June 1950, Ralph Russell, May 50, 7.
Quarterly outlook for marketing fishery products July - Sept. 1950, Ralph Russell, Aug. 50, 1.
Refrigerated shipment of frozen seafood and handling during marketing, Harry R. Beard, July 50, 5.
"Retailing Fish" - a new movie, May 48, 5.
Salesman versus order takers, Leo Young, May 49, 15.

MEAL (see FISH MEAL)

MENHADEN

Experimental production of blown menhaden oil, C. D. Bittenbender, Sept. 50, 19.
Introducing the largest fishing boat to be constructed in the south: the Mattie H. Phillips, Apr. 49, 15.
Menhaden byproducts essential to industry, Aug. 50, 21.
Menhaden fisheries come to Texas, Ruel McDaniel, May 49, 5.
Predictions of a menhaden industry revival, Sept. 49, 9.

METHODS, FISHING (see FISHING METHODS)

MEXICAN FISHERIES (see NORTH AMERICAN FISHERIES - Mexican and Central American fisheries)

MUSSELS (see SHELLFISH AND CRUSTACEANS, MISCELLANEOUS - General and miscellaneous)

NEW ZEALAND FISHERIES (see AUSTRALIAN AND NEW ZEALAND FISHERIES)

NORTH AMERICAN FISHERIES

Alaskan fisheries

Alaska's herring industry makes impressive recovery, Jan. 49, 7.
Albacore tuna exploration in Alaskan and adjacent waters - 1949, Donald E. Powell, Henry A. Hildebrand, Sept. 50, 3.
Commercial fisheries of the Pacific Coast states and Alaska, June 49, 5.
Experimental fishing trip to Bering Sea, Joseph E. King, June 49, 13.
Exploratory fishing expedition to the northern Bering Sea in June and July 1949, J. G. Ellson, et al, July 50, 15.
Freezing and canning king crab, John A. Dassow, Sept. 50, 13.
Hunting king crab, Feb. 48, 11.
King crab - three expeditions work for Alaska fishery, Jan. 48, 3.
Parks flying frozen crabmeat from Alaska by the planeload, Jan. 48, 7.
Seldovia fish waste utilized, Mar. 49, 9.
S. S. Pacific Explorer. Part V. 1948 operation in the North Pacific and Bering Sea, Norman B. Wigutoff, Carl B. Carlson, July 50, 1.
Survey of the commercial fishery possibilities of Seward Peninsula area, Katzebue Sound and certain inland rivers and lakes in Alaska, Norman B. Wigutoff, Sept. 50, 13.

Alasken fisheries (Cont'd)

Vitamin A in liver of Alaska fur seal, F. B. Sanford, et al, Sept. 49, 15.

Canadian fisheries

East coast

Fish and fish products. Condition of Newfoundland's industry, Aug. 48, 9.
Fisheries of New Brunswick (Canada), Lewis Dean Brown, May 50, 19.
Fisheries one of chief industries of Newfoundland, R. J. Britton, Sept. 48, 3.
Fresh fish industry of great value to Halifax, H. V. Laing, Apr. 49, 7.
Newfoundland fisheries outlook discouraging, Jan. 48, 9.
(Newfoundland) fish export in 1947 weaker, Jan. 49, 17.
Newfoundland fishing industry, Apr. 48, 23.
Newfoundland fresh fish industry, Rupert Jackson, Mar. 49, 13.
Newfoundland herring industry, Rupert Jackson, Apr. 49, 5.
Newfoundland's fisheries and union with Canada, Rupert Jackson, Nov. 48, 17.
Newfoundland - the salt cod industry, Rupert Jackson, Feb. 49, 23.
Recovery of Newfoundland's seal fishery, Oct. 48, 15.
Whale and sperm oil production and exports, Newfoundland, Oct. 48, 1.

General

Canada tests fish freezing train, July 48, 7.
Canadian consumption of fish, 1948, Feb. 50, 15.
Canadian fishery markets, review and outlook, July 49, 11.
Economic situation in world markets, Feb. 49, 13.
Fishery industries of North America. Part I. Fresh and frozen fish, J. A. Lovern, July 48, 13.
Marine oil industry of Canada, Dec. 49, 5.

Interior and Arctic

Analyses of freshwater fishes from Canadian interior provinces, P. J. Schmidt, Oct. 48, 11.
Canada's rights in the Arctic, June 48, 3.
Saskatchewan fisheries survey, June 48, 9.
Utilization of freshwater fish, trimmings and offal, A. W. Lantz, June 50, 9.

West coast

British Columbia's tuna fishermen, Peter Madison, Jan. 49, 9.
British Columbia whaling venture, Peter Madison, Dec. 48, 3.
Canadian albacore taken close-in from cold water, Jan. 49, 9.
Canadian fishermen prepare to try floating set lines for albacore, Oct. 48, 5.
Canadians report new data on their albacore fishery, Feb. 49, 9.
Crab fishing off the Queen Charlotte Islands, R. G. McMynn, June 50, 11.
Decline of the soupfins shark fishery in British Columbia, W. E. Barraclough, Apr. 49, 17.
Fish and fish products. Salmon pack, British Columbia, Canada, Oct. 48, 13.
Fishermen's cooperative movement gains stature in British Columbia, Apr. 50, 25.
Fishes of the Pacific Coast of Canada, Wilbert A. Clemens, G. Van Wilby, Mar. 48, 31.
Halibut fishing in British Columbia, Canada, Aug. 48, 17.
Herring catch, products and prices, British Columbia, Canada, Apr. 48, 5.
How does Canada's austerity program affect the British Columbia fishing industry? Mar. 48, 7.
May sell canned whalemeat next year, Apr. 49, 9.

West coast (Cont'd)

Situation in salmon industry British Columbia, Canada, Feb. 48, 5.
Tuna canning in British Columbia, Peter Madison, Nov. 48, 9.
Whaling comes back to the British Columbia coast, Mar. 49, 15.

Mexican and Central American fisheries

Big Mexican shrimp plants expanded and modernized, Feb. 50, 23.
Costa Rica fishing laws modified, Apr. 50, 21.
Costa Rica. Promulgation of fisheries law, Feb. 49, 15.
Cuba's spiny lobster industry, Joseph L. Martinez, July 48, 27.
Fisheries and fishery resources of Mexico, M. J. Lindner, Feb. 49, 21.
Mexican fisheries industry, Alan E. Hool, Sept. 49, 21.
Mexican fisheries industry, Alan E. Hool, Dec. 49, 23.
Mexican fishery law of Dec. 31, 1949, Milton J. Lindner, Ray Kaplan, May 50, 23.
Mexican marine fisheries awakening industry interest, Frank E. Firth, July 48, 17.
Mexican problem: U. S. authorities meet to iron out difficulties, Mar. 49, 5.
Mexico, John Springer, Jan. 50, 15.
Mexico, John Springer, Feb. 50, 9.
Mexico good market for canned and dried fish, Aug. 48, 25.
Processing of shark livers, Mexico, Dec. 48, 9.
Shark liver industry, Manzanillo, Mexico, Feb. 48, 21.
Shark liver oil from Trinidad, F. Major, R. W. Pearman, May 50, 11.
West Mexican shrimping ships U. S. 10 million pounds, Oct. 48, 3.
What about Mexican shrimping? Dave Lord, Nov. 48, 17.

Miscellaneous U. S. territories (except Alaska)

Fiji based tuna fleet will supply cannery built in American territory, Jan. 49, 3.
Fishery exploration in the Hawaiian Islands, Howard H. Eckles, Feb. 50, 19.
Hawaiian tuna packers explore with big clipper, Apr. 49, 9.
Samoan tuna cannery equipment wins praise, June 50, 19.

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Gulf of Mexico

Biloxi shrimp industry optimistic about business, Apr. 49, 1.
Frozen jumbo shrimp a specialty at Biloxi, Terry Mitchell, Feb. 49, 25.
Menhaden fisheries come to Texas, Ruel McDaniel, May 49, 5.
New "conservation" law governing Texas commercial fishing boats, July 49, 15.
New tuna fleet sails from Houston, Texas for Pacific waters, Sept. 49, 5.
Oyster production in the South Atlantic and Gulf States, Lewis Radcliffe, Sept. 49, 21.
Port Isabel - an increasingly important center of Texas seafood production, Sept. 49, 21.
Shrimp fishery of the southern U. S., W. W. Anderson, et al, Aug. 49, 3.

Inland

Fresh water fish canning, Aug. 50, 9.
New industry in Utah utilizes trash fish, Aug. 49, 21.
River fishing's a rugged business, Herbert J. Fisher, Mar. 50, 17.
Utilization of freshwater fish, trimmings and offal, A. W. Lantz, June 50, 9.

Middle and south Atlantic

Agar industry of North Carolina, Jan. 48, 1.

Middle and south Atlantic (Cont'd)

Chesapeake Bay crab industry, James Wharton, June 48, 5.
Modern shark fishing, Jan. 48, 17.
Mullet - Florida's leading fish, Feb. 49, 23.
New fishery for grooved shrimp in South Florida, Clarence P. Idyll, July 50, 17.
North Carolina shrimp, Feb. 49, 7.
Oyster industry of North Carolina, A. F. Chestnut, Apr. 50, 23.
Science builds future for fisheries, Oct. 49, 23.
Spiny lobster industry of the Caribbean and Florida, F. G. Walton Smith, Aug. 49, 9.

New England

Boston fish pier - world's largest for the exclusive handling of fish, Sept. 49, 21.
Byproducts of the fish industry, Sidney L. Feener, Earl P. McFee, Sept. 49, 5.
Fish canning on the New England Coast, Micheal Vucassovich, Apr. 48, 17.
Fishery industry of North America. Part I. Fresh and frozen fish, J. A. Lovern, July 48, 13.
North Atlantic tuna, Donald S. Ross, May 49, 15.
Once famous New England industry my be revived, July 49, 11.
There's good hard cash in stickwater, June 50, 21.

West coast

Abalones of California, Paul Bonnot, Sept. 49, 15.
Canned fish hand - i - book, July 50, 3.
Commercial fish catch of California for 1947 with an historical review of 1916-1947, Apr. 50, 21.
Commercial fisheries of the Pacific Coast states and Alaska, June 49, 5.
Common marine fishes of California, Phil M. Roedel, Feb. 49, 11.
Great white shark Carcharodon carcharias (Linnaeus) in California waters during 1948, John E. Fitch, July 49, 15.
Kuljis reviews problems of coast otter trawl fishery, May 49, 19.
New Seattle fish docks, Apr. 50, 3.
Oceanography and sardines, Aug. 49, 7.
Perfected plant - compelling package, Apr. 50, 15.
Port of Bellingham aids growth of fish industry, June 50, 23.
Port of Blaine is planning for expansion of fishery, Apr. 50, 19.
Port of Eureka surveys its growing fishing industry, Whit Allyn, June 50, 23.
Preliminary report on the soupfin shark fishery in Washington, Kelshaw Bonham, F. Bruce Sanford, Nov. 49, 3.
Review of the Southern California spiny lobster fishery, Robert C. Wilson, Aug. 48, 1.
Utilization of fishery byproducts in Washington and Oregon, F. Bruce Sanford, Aug. 50, 7.
West coast byproducts plant, Feb. 50, 1.

NORWAY (see EUROPEAN FISHERIES - Norway)

NUTRITION AND MEDICINE, GENERAL

General and miscellaneous

Advice on efficient rations offered at Kansas conference, June 49, 17.
Analytical and experimental study of the effects of increased protein with liberal calcium and riboflavin intakes: Complete life cycles, H. C. Sherman, H. L. Campbell, M. S. Ragan, June 49, 11.
Behind the markets, Harry Stenerson, Dec. 48, 11.
Current advances in the chemistry of nutrition, Henry C. Sherman, Nov. 49, 9.
Diet of the cow, G. H. Wise, Dec. 48, 15.

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Discoveries point way to nutritional advances, Chas. G. King, Sept. 49, 9.
Effect of excess calcium in poultry rations, G. F. Heuser, Apr. 48, 7.
New advances in the science of nutrition, Chas. Glen King, May 49, 7.
New horizons in animal nutrition and farm chemurgy (IV), H. J. Prebluda, Sept. 49, 17.
New look at the feed tag, Perry T. Kistler, May 49, 17.
New trend in animal nutrition, H. J. Prebluda, Jan. 49, 7.
Nutritional factors of feeds, W. M. Beeson, Feb. 50, 3.
Nutritional requirements of the fox and mink, Feb. 49, 5.
Nutrition of fish in hatcheries, a literature review, Neva Karrick, June 49, 1.
Progress in swine nutrition, J. L. Krider, Aug. 48, 7.
Seven decades of nutrition research, C. A. Elvehjem, June 49, 5.
Studies in poultry nutrition, C. E. Lee, July 49, 15.
Studies in turkey nutrition using a purified diet, M. L. Scott, et al, Feb. 49, 25.
Studies of nutrition reviewed at third Washington conference, July 49, 13.
Trace minerals and animal nutrition, H. W. Wilgus, July 49, 23.

Protein and amino acids

Amino acids in feeds, Jerry Sotola, Oct. 48, 17.
Concentrative assimilation of amino acids and imbalance in amino acid nutrition, Oct. 49, 15.
Influence of heat-processing on the functional and nutritive properties of protein, Daniel Melnick, Bernard L. Oser, May 49, 11.
Methionine, choline, betaine and fish products in a simplified ration, D. H. Mishler, et al, Nov. 48, 13.
Principles of the biological evaluation of protein, Erich Sachs, Rueben L. Larsen, Oct. 48, 19.
Proteins and amino acids in animal nutrition, H. J. Almquist, Feb. 49, 1.
Putting protein nutrition on an amino acid basis, L. A. Maynard, Apr. 48, 7.
Quality of proteins, D. P. Cuthbertson, June 48, 1.
Relationship between total digestible nutrients and gross efficiency of rations for growing chicks, Till Huston, J. C. Bell, Robert S. Wheeler, Oct. 48, 9.
Report of protein evaluation in fish and animal products, Frank Kokoski, Feb. 48, 9.
Rose reports human amino acid requirements, Sept. 49, 5.
Soybean oil meal for feed, J. W. Hayward, Dec. 48, 7.
Studies on all vegetable protein rations, Rebecca Emerson, et al, Oct. 49, 13.

Vitamins

Carotene utilization by breeder hens, Rollin H. Thayer, V. G. Heller, Dec. 48, 9.
Drug promotes growth, July 50, 11.
Dr. Wise experiments on feeding vitamin A to cows, Dec. 48, 13.
Effects of drug (aureomycin) on growth shown, Geo. M. Briggs, Aug. 50, 9.
FDA feed control officials advise restraint in claims in use of antibiotics in feeds, Sept. 50, 1.
Folic acid studies in the mink and fox, S. B. Tove, A. E. Schaefer, C. A. Elvehjem, Feb. 50, 23.
Known and unidentified factors supplement a corn soybean meal ration for weanling pigs in drylot, I. A. Dyer, et al, Feb. 50, 7.
Quantitative aspects of the storage of vitamin A, A. W. Davies, et al, Dec. 48, 3.
Results of a vitamin A storage study, Vincent Schultz, Dec. 48, 7.
Short survey of the biological significance of vitamins and related substances, P. Karrer, Jan. 50, 15.
Storage by bobwhite quail of vitamin A fed in various forms, R. B. Nestler, et al, Dec. 48, 17.

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Unknown factor found needed for lactation, Jan. 49, 15.
Utilization of vitamin A and beta-carotene by turkey poults, Remzi Gurcay, et al, Nov. 48, 9.
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Comparative study of the oxidation and polymerization of linseed oil by application of some recently developed physical technics, G. A. O'Hare, P. S. Hess, A. F. Kopacki, Dec. 49, 11.
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"Pacific perch", Sept. 50, 19.
Storage life of whole and split rockfish fillets, M. E. Stansby, John Dassow, Dec. 49, 13.

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Biological assay of the nutritional value of certain salmon cannery waste products, Roger E. Burrows, Neva L. Karrick, Mar. 48, 23.
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They engineered a better canned salmon, Ralph M. Berglund, Aug. 50, 3.
United States canned salmon and sardine exports, Jan. 49, 9.
Utilization of fish wastes. Commercial enzymes from the pyloric caeca of fish, Norman E. Cooke, Niranjan K. Chowdhury, Nov. 48, 11.
Utilization of fish waste. The economics of the separation of salmon offal, Norman E. Cooke, Mar. 50, 1.

SALT FISH

Biological stability of smoked and salted fish, J. M. Shewan, Nov. 49, 1.
Care and preservation of fish as food. (B) Some bacteriological aspects of handling, processing and distribution of fish, J. M. Shewan, Jan. 50, 1.
Care and preservation of fish as food. (C) Trends and developments in fish technology, C. L. Cutting, Jan. 50, 1.
Conditions of storage during transportation of salt fish, R. Legendre, Aug. 50, 9.
Effect of freezing and thawing of muscular tissue, E. H. Callow, Dec. 49, 19.
Fish canning on the New England coast, Micheal Vucassovich, Apr. 48, 17.
Fishery industries of North America. Part II, Salt cod, J. A. Lovern, Aug. 48, 17.
"Le Rogue" - "The Red", H. P. Dussault, Apr. 49, 17.
Mechanization in the herring industry, Aug. 50, 9.
New codfish curing plants in Spain, Feb. 49, 13.
Newfoundland - the salt cod industry, Rupert Jackson, Feb. 49, 23.
New technics in commercial preservation of fish, Norman D. Jarvis, Hugo W. Nilson, Feb. 48, 25.
Nomograph for drying calculations, H. Fougere, July 50, 9.
Note on the estimation of sulfur dioxide in fish muscle, J. M. Shewan, Apr. 49, 3.
Recent experiments in the salt curing of herring, J. M. Shewan, Feb. 49, 7.
Salted cod and related species, G. M. Gerhardens, L. P. D. Gertenbach, Nov. 49, 1.
Salted cod, the industry and world trade, Feb. 50, 15.
Torry research report for 1947, Franklin Kidd, Jan. 50, 7.
Why we are still troubled with red discoloration in salted fish, C. H. Castell, June 50, 19.
Yellow stains in salt fish, W. J. Dyer, Sept. 49, 19.

SANITATION (see PRESERVATIVES AND SANITATION)

SARDINES

Age and length composition of the sardine catch off the Pacific Coast of the United States and Canada in 1949-50, Frances E. Felin, Anita E. Daugherty, Leo Pinpas, Sept. 50, 21.

SARDINES (Cont'd)

Canned fish hand - i - book, July 50, 3.
Cornish pilchard canning industry, J. R. Burrell, May 50, 13.
French sardine canners keep accent on taste, Henri Cheftel, May 50, 13.
Golden Bear to the rescue, Stuart Alton, June 49, 15.
Growth of South African fisheries, John C. Fuess, Mar. 50, 19.
Hook and liners now netting, Dec. 48, 19.
Nutritive value of canned foods. XXV. Vitamin content of canned fish products, J. B. Neilands, et al, Mar. 48, 15.
Oceanography and sardines, Aug. 49, 7.
Recent developments in sardine industry, Jan. 49, 17.
Seining with electric lamp gets pilchards, F. Blackburn, Jan. 50, 17.
U. S. canned salmon and sardine exports, Jan. 49, 9.

SEA WEED (see MARINE PLANT PRODUCTS)

SHARKS

Composition of oil and vitamin content

Absence of vitamin A in liver oil of the brown shark, F. Bruce Sanford, Kelshaw Bonham, July 50, 15.
Chemical studies on shark meat. I. Chemical composition of shark meat, Kinsuke Kondo, et al, Oct. 48, 23.
Distribution of vitamin A in shark livers, Ullal Sundar Kini, R. Jayaraman, July 48, 31.
Investigation of the Adriatic elasmobranch liver oils. III. Contribution to the knowledge of the oil from the eggs of Acanthias vulgaris, S. Cmelik, Feb. 49, 3.
New Zealand fish oils. 5. Composition of the fats of the school shark (Galeorhinus australis, Macleay), A. P. Oliver, F. B. Shorland, Mar. 49, 19.
Notes on the biology of the tiger shark (Galeocerdo arcticus) from Philippine waters, Donald E. Kaufman, Sept. 50, 21.
Notes on the vitamin A content of the liver oil of the vaalhaai or soupfin shark (Galeorhinus zyopterus), J. A. M. Archer, July 50, 13.
Report of the technology division, C. L. Anderson, Feb. 49, 15.
Shark liver oil from Trinidad, F. Major, R. W. Pearman, May 50, 11.
South African fish products. Part XXVIII. Composition of the liver oil of the seven-gilled shark Heptranchias pectorosus (Garman), M. L. Karnovsky, W. S. Rapson, H. M. Schwartz, Sept. 48, 19.
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Spectrophotometric examination of shark liver oils and products derived from them, E. H. Phillip, Dec. 48, 23.
Vitamin A and D potencies of the liver oil of the Pacific cod Gadus macrocephalus, P. K. Mathew, et al, Nov. 49, 23.
Vitamin A content of Cuban cow's milk and of liver oils of Cuban sea sharks, J. J. Angula, et al, June 48, 9.
Vitamin A content of the liver of the frilled shark, Willard L. McRary, Jan. 49, 17.
Vitamin A in dogfish livers, Lyle A. Swain, Feb. 48, 13.
Vitamin A in 155 grayfish livers, F. Bruce Sanford, et al, July 50, 11.
Vitamin E content of foods, Phillip L. Harris, et al, June 50, 1.

Human food

Australians like shark steaks, Mar. 50, 5.
Canning of mackerel shark, Alice Bruum, Knud Nielson, May 49, 21.
Quality of iced fish, Franklin Kidd, Aug. 50, 1.
Sharks, the terror of the seas, may turn out to be a food fish, Harwell Howard, Feb. 50, 11.

Processing of livers

Composition of shark meal, Sydney P. Marshall, Geo. K. Davis, Jan. 49, 21.
Effect of storage and acidity on the protection of vitamin A in shark liver oil by antioxidants, S. M. Bose, Apr. 48, 15.
Oil from shark livers, Brazil, Nov. 48, 1.
Studies of the utilization of liver oils of deep sea sharks. I. Yields of liver from deep-sea sharks, H. Higashi, et al, Oct. 49, 23.

Shark fishery

Australia's shark liver oil industry, Apr. 50, 7.
Biological and vitamin A studies of dogfish (Squalus suckleyi) landed in the state of Washington, Kelshaw Bonham, et al, Nov. 49, 3.
Decline of the soupfin shark fishery in British Columbia, W. E. Barraclough, Apr. 49, 17.
Fear extinction of soupfin shark, Aug. 48, 31.
Great white shark Carcharodon carcharias (Linnaeus) in California waters during 1948, John E. Fitch, July 49, 15.
Modern shark fishing, Jan. 48, 17.
Preliminary report on the soupfin shark fishery in Washington, Kelshaw Bonham, F. Bruce Sanford, Nov. 49, 3.
Relationship between body length of grayfish and vitamin A in liver, F. Bruce Sanford, Kelshaw Bonham, Apr. 48, 1.
Shark fishing potentialities of the Philippine seas, Herbert E. Warfel, John A. Clague, July 50, 17.
Shark liver industry, Manzanillo, Mexico, Feb. 48, 21.
States to limit soupfin landings to male livers, Apr. 49, 15.
Try repellant to defeat sharks, Feb. 50, 23.
Two threats to South African sharking, G. M. Dreosti, Mar. 49, 17.

SHELLFISH AND CRUSTACEANS (see also CRAB; LOBSTERS; OYSTERS; SHRIMP)

SHELLFISH AND CRUSTACEANS, MISCELLANEOUS

Abalone

Abalones of California, Paul Bonnot, Sept. 49, 15.
Abalone steaks - trimmed, sliced, packaged, Merle Severn, July 49, 11.
Frozen abalone now packed in consumer size cartons, Feb. 48, 3.

Clams

(analysis of) clams, mussels and oysters, Elmer R. Tobez, May 49, 23.
Bacteriological investigation of the Japanese clam canneries. II. A heat-resistant anaerobe isolated from fresh clam meat, K. Amano, Jan. 50, 33.
East coast clam survey underway, Mar. 50, 7.
Modern clam processing plant, June 49, 3.
Observation on the Japanese clam fisheries, John B. Glud, Jan. 49, 19.
Paralytic shellfish poison. I. Occurence and concentration by ion exchange, Hermann Sommer, et al, July 48, 21.
Paralytic shellfish poison. II. Purification by chromatography, Hermann Sommer, et al, July 48, 11.
Paralytic shellfish poison. IV. Bases accompanying the poison, Byron Riegel, et al, May 49, 5.
Paralytic shellfish poisoning and Goniaulax tamarensis, Alfreda B. Needler, Oct. 49, 17.
Paralytic shellfish poisoning on the Canadian Atlantic coast, J. Gibbard, J. Naubert, July 48, 17.

Clams (Cont'd)

Shellfish poisoning, Dorothy M. Furk, Sept. 50, 7.
Woods Hole oceanographers use rakes literally wired for sound to locate underwater clam beds, Feb. 50, 3.

Crawfish (see Lobsters)

Distribution of chitin in crawfish, C. L. Southall, N. J. Van Rensburg, Oct. 49, 17.
South African crawfish industry, May 48, 15.
Tunnel drying of crawfish bodies, G. M. Dreosti, C. L. Southall, Apr. 48, 15.

General and miscellaneous

Acid soluble pigments of molluscan shells. 1. The distribution of porphyrin fluorescence in molluscan shells. 2. Pigments other than porphyrins. 3. Indigoid character of the blue pigment of (Haliotis cracherodii, Leach) 4. Identification of shell porphyrins with particular reference to conchoporphyrin, A. Comfort, May 50, 23.
Mussel resources of the north Atlantic regions. Part II. Observations on the biology and the methods of collecting and processing the mussel, Leslie W. Scattergood, Clyde C. Taylor, Feb. 50, 5.
Mussel resources of the north Atlantic region. Part III. Development of the fishery and the possible need for conservation measures, Leslie W. Scattergood, Clyde C. Taylor, May 50, 23.
Preformed vitamin A in crustacea, S. K. Kon, S. Y. Thompson, Apr. 50, 23.
Proteolytic and lipolytic enzymes in the stomach juice of some lamellibranchia, Bek J. J. Mansour, July 49, 23.
Rhode Island quahog dredgers using "jet" equipment, Feb. 50, 25.
Technological study of the ocean quahog fishery, W. Arcisz, L. A. Sandholzer, Jan. 48, 1.

Scallops

Dark meat and the shell disease of scallops, J. C. Medcof, Sept. 49, 21.
Offering canned scallops, Aug. 49, 21.
Scallop fishery living on good past years, Mar. 50, 21.

SHIPMENT (see TRANSPORTATION; FROZEN FISH, GENERAL - Transportation; HANDLING FRESH FISH)

SHRIMP

Frozen shrimp

Conditions affecting the quality of quick frozen shrimp, E. A. Fieger, C. W. DuBoise, Mar. 49, 17.
Experiments on the storage of frozen shrimp, O. C. Young, D. H. Taylor, Aug. 48, 11.
Freezing of shrimp, Aug. 49, 7.
Fresh and frozen shrimp in refrigerated storage, E. A. Fieger, Oct. 48, 19.
Frozen jumbo shrimp a specialty at Biloxi, Terry Mitchell, Feb. 49, 25.
Notes on freezing shrimp, J. M. Lemon, June 48, 13.
Packaged frozen shrimp, Apr. 50, 23.
Shrimp handling and preservation, E. A. Fieger, July 50, 5.
What effect does cooking time and packaging have on frozen boiled shrimp? H. Lewis, Jan. 48, 5; July 48, 19.

Gear

Construction and rigging of shrimp trawls. Part I, N. W. Edwards, June 50, 21.
Construction and rigging of shrimp trawls. Part II. General rules for making trawls, N. W. Edwards, July 50, 25.
New shrimp net designed to release immature fish, Sept. 49, 5.
New type of net for shrimpers proves instant success, June 48, 3.

Processing and equipment

Fiberglas--insulated shipping container for frozen shrimps, July 49, 1.
New machine for shrimp packers, Aug. 50, 17.
New shrimp blanching tank, Aug. 50, 13.
Shrimp keep better when alkali treated, July 50, 13.
Shrimp peeling machine, Jan. 50, 23.
Shrimp processing afloat, Aug. 48, 19.
Shrimp sorting machine, A. W. Lantz, Dec. 49, 1.

Shrimp industry

Big Mexican shrimp plants expanded and modernized, Feb. 50, 23.
Biloxi shrimp industry optimistic about business, Apr. 49, 1.
Florida firm enters frozen ready-to-cook packaged shrimp field, May 50, 3.
German shrimp processing industry, H. S. Bondi, et al, Jan. 48, 9.
Let's popularize Brazilian shrimp, Nov. 48, 11.
New fishery for grooved shrimp in southern Florida, Clarence P. Idyll, July 50, 17.
North Carolina shrimp, Feb. 49, 7.
Shrimp fishery of the southern United States, W. W. Anderson, M. J. Lindner, J. E. King, Aug. 49, 3.
West Mexican shrimping ships United States 10 million pounds, Oct. 48, 3.
What about Mexican shrimping? Dave Lord, Nov. 48, 17.

Special products

Bait is big business, Sept. 49, 9.
Keep live shrimp for bait, Sept. 49, 21.
New item to the fore--fantail breaded shrimp, May 50, 11.
Ready to sell shrimp cocktails, Nov. 49, 15.

Spoilage and its detection

Bacteriology of shrimp. I. Introduction and development of experimental procedures, Margaret Green, Apr. 50, 5.
Bacteriology of shrimp. II. Quantitative studies of freshly caught and iced shrimp, Margaret Green, Apr. 50, 5.
Bacteriology of shrimp. III. Quantitative studies of frozen shrimp, Margaret Green, Apr. 50, 5.
Bacteriology of shrimp. IV. Coliform bacteria in shrimp, Margaret Green, Apr. 50, 5.
Bacteriology of shrimp. V. Effect of peeling, glazing and storage temperature on bacteria in frozen shrimp, Doris Holmes, C. S. McCleskey, Apr. 50, 7.
Indole in shrimp, oysters and crabmeat. Tentative analytical method, May 48, 17.
Report on decomposition in shellfish, indole in shrimp, oysters and crabmeat, R. E. Dugan, Nov. 48, 15.

SMOKED FISH

General and miscellaneous

Biological stability of smoked and salted fish, J. M. Shewan, Nov. 49, 1.

General and miscellaneous (Cont'd)

Care and preservation of fish as food. (a) General introduction to technological problems of the fish industry, G. A. Reay, Jan. 50, 1.
Care and preservation of fish as food.(b) Some bacteriological aspects of handling, processing and distribution of fish, J. M. Shewan, Jan. 50, 1.
Care and preservation of fish as food.(c) Trends and developments in fish industry, C. L. Cutting, Jan. 50, 1.
Develop Philippine oyster canning project, Nov. 48, 3.
Experiments on the smoking of freshwater fish, A. W. Lantz, Dec. 48, 1.
Freezing and storage of fish, A. Banks, Aug. 48, 21.
Liquid for the wet smoking of fish (research preparation and technological tests), S. N. Surzhin, Mar. 48, 3.
Mechanization in the herring industry, Aug. 50, 9.
Packing of smoked eel in oil, H. Riemann, June 49, 17.
Preservation of fish, May 49, 13.
Smoke curing, Franklin Kidd, Aug. 50, 7.
Study on the bactericidal action of eel smoking, C. J. H. Van den Broek, Oct. 48, 17.
Tests on bacon point way to keep it fresh in cans, John A. Ulrich, May 49, 13.
Torry research report for 1947, Franklin Kidd, Jan. 50, 7.

Smokehouses and other equipment

Air-conditioned tunnel for processing fish. III. A commercial conveyor-type vertical kiln, A. W. Lantz, June 50, 13.
Automatic smoke generator for smoking fish, J. S. M. Harrison, S. W. Roach, June 50, 11.
Distant action thermometer for fish products, J. Marshak, Mar. 48, 11.
Efficient operation of drying plant. Part I, Leo Walter, Aug. 50, 11.
Modification in design of the AFES tunnel-type smokehouse, A. L. Wood, July 48, 5.
New technics in commercial preservation of fish, Norman D. Jarvis, Hugo W. Nilson, Feb. 48, 25.
Present trends and future developments in the technology of fish, J. A. Lovern, Feb. 48, 1.
Small smokehouse, C. E. Dillon, Nov. 49, 13.
Smoke-curing of fish and the application of a controlled method to the process, Clarence L. Anderson, Robert K. Pederson, April 48, 17.
Smoke washing unit improves meat quality, Apr. 48, 19.
Torry research station controlled fish smoking kiln, C. L. Cutting, June 50, 3.

SOLE (see FLATFISH)

SOLUBLES (see FISH MEAL, NUTRITIVE VALUE - Fish solubles; FISH MEAL AND OIL, MANUFACTURE - Fish solubles)

SOUTH AMERICAN FISHERIES

Anchovy fishery in Argentina, Dec. 49, 23.
Black-fish industry, St. Vincent, British West Indies, Aug. 48, 25.
Ecuador. Tuna-fishing regulations revised, Dec. 48, 17.
Ex-FAWS official sees South America as rich with undeveloped fisheries, Mar. 48, 5.
Fish and fish products (British Honduras, Norway), Aug. 48, 7.
Fishing and fisheries (Brazil), Mar. 50, 5.
Fishing industry in Brazil, Jack E. Conner, July 49, 13.
Norwegians eye fisheries of Galapagoes, Jan. 49, 7.
Oil from shark livers, Brazil, Nov. 48, 1.
Peru fishing industry undergoing modernization, John Wilhelm, Jun 48, 19.
Peru: Fish meal, fish and seal oil. Base cost price established for assessment of export duties, Feb. 49, 9.

SOUTH AMERICAN FISHERIES (Cont'd)

South America - a fish meal factor? E. Wilson Lockwood, Sept. 49, 7.
South America offers golden opportunity, John S. Robas, Nov. 49, 5.
Tuna packing in Peru becoming an industry, Clara Baldwin, Apr. 48, 1.

SPICED FISH (see PRESERVED FISH, MISCELLANEOUS)

SPOILAGE (see also FRESHNESS OF FISH; FROZEN FISH, CHANGES DURING FREEZING AND STORAGE)

SPOILAGE

Bacterial spoilage of fresh fish

Bacteria associated with spoilage of cod fillets, C. H. Castell, G. W. Andersen, May 49, 7.
Bacteriological investigation of the Japanese clam canneries. II. A heat resistant anaerobe isolated from fresh clam meat, K. Amano, Jan. 50, 33.
Bacteriology of shrimp. II. Quantitative studies of freshly caught and iced shrimp, Margaret Green, Apr. 50, 5.
Bacterial reduction of sodium nitrite and formation of trimethylamine in fish, W. J. Dyer, Oct. 49, 5.
Biological stability of canned marine products, E. P. Sidaway, Nov. 48, 7.
Care and preservation of fish as food. (b) Some bacteriological aspects of handling, processing and distribution of fish, J. M. Shewan, Jan. 50, 1.
Control of fillet contamination in fish plants. Part II. The relationship between the initial contamination and the subsequent rate of spoilage, C. H. Castell, Apr. 50, 3.
Differentiation of marine and non-marine culture of Pseudomonas, C. H. Castell, Sept. 48, 11.
Effect of flesh acidity on bacterial numbers and trimethylamine in spoiling fish, H. L. A. Tarr, Phyllis W. Ney, Aug. 49, 15.
Effect of nitrite on reduction of trimethylamine oxide in cod fillets, C. H. Castell, June 49, 3.
Further studies on the bacteriological reduction of nitrite in fish during spoilage, W. J. Dyer, C. H. Castell, Jan. 50, 9.
Influence of trimethylamine oxide on the bacterial reduction of redox indicators, C. H. Castell, June 50, 21.
Nitrite reducing bacteria on cod fillets, C. H. Castell, Jan. 50, 17.
Preliminary study of total bacterial plate count method for fishery products, R. Paul Elliott, Apr. 49, 1.
Pseudomonas putrefaciens from cod fillets, C. H. Castell, et al, June 49, 7.
Relation of bacterial count to quality of cod fillets, C. H. Castell, et al, Apr. 49, 15.

Bacterial spoilage of frozen and preserved fish

Bacteriology of shrimp. III. Quantitative studies of frozen shrimp, Margaret Green, Apr. 50, 5.
Bacteriology of shrimp. V. Effect of peeling, glazing and storage temperature on bacteria in frozen shrimp, Doris Holmes, C. S. McCleskey, Apr. 50, 7.
Biological stability of smoked and salted fish, J. M. Shewan, Nov. 49, 1.
"Le Rogue" - "The Red", H. P. Dussault, Apr. 49, 17.
Study on the bactericidal action of eel smoking, C. J. H. Van den Broek, Oct. 48, 17.
Swelling and corrosion in canned fish, Francisco L. Capont, July 49, 23.
Why we are still troubled with red discoloration in salted fish, C. H. Castell, June 50, 19.

General and miscellaneous

Care and preservation of fish as food, (a) General introduction to technological problems of the fish industry, G. A. Reay, Jan. 50, 1.

General and miscellaneous (Cont'd)

Care and preservation of fish as food. (c) Trends and developments in fish technology, C. L. Cutting, Jan. 50, 1.
Changes in palatability of cod fillets, F. E. Dyer, W. J. Dyer, July 49, 1.
Comparison of chemical changes in mackerel tissues treated by ionizing radiation, J. T. R. Nickerson, et al, Aug. 50, 13.
Conditions affecting the quality of quick frozen shrimp, E. A. Fieger, C. W. Du Bois, Mar. 49, 17.
Effect of pH on the enzymatic reduction of trimethylamine oxide, C. H. Castell, J. M. Snow, Mar. 50, 25.
Fish spoilage, Oct. 49, 13.
Handling and stowage of herrings, R. A. Reay, J. M. Shewan, Nov. 49, 7.
Keeping time and quality of sea food fillets, C. H. Castell, July 48, 19.
Refrigeration temperatures and keeping time of fresh fish, C. H. Castell, Apr. 49, 17.
Some aspects of trimethylamine formation in swordfish, David W. Anderson, Jr., Carl R. Fellers, Nov. 49, 3.
Some technological aspects of the fresh and frozen seafood industry, Harry R. Beard, Sept. 50, 17.
Spoilage of fresh fish and its control, Geo. A. Reay, May 49, 3.
Spoilage rates at 37° and 32° F., C. H. Castell, Jan. 50, 23.
Storage of haddock, B. E. Proctor, et al, June 50, 17.
Tests on bacon point way to keep it fresh in cans, John A. Ulrich, May 49, 13.
Value of temperature close to freezing on the storage of fish, C. H. Castell, W. A. MacCallum, Sept. 50, 17.

STATISTICS (see ECONOMICS AND STATISTICS - (Statistics)

STICKWATER (see FISH MEAL, NUTRITIVE VALUE - Fish solubles; FISH MEAL AND OIL, MANUFACTURE - Fish solubles)

STORAGE (see FROZEN FISH, CHANGES DURING FREEZING AND COLD STORAGE - Cold storage; HANDLING FRESH FISH)

TASTING PANELS (see ANALYSIS, GENERAL - Organoleptic tests)

TECHNOLOGY (see FOOD TECHNOLOGY)

TOXICITY (see NUTRITIONAL VALUE OF FISH AND TOXICITY)

TRANSPORTATION

Air shipment

Air shipment of frozen Pacific crab, Sept. 48, 23.
Air transport and the market possibilities of the midwest, Robert Ramspeck, Jan. 50, 3.
Air transport of fish, S. A. Beatty, July 48, 9.
Cook Inlet kings flown to Seattle, Feb. 50, 21.
Flying fish to market, Robert Ramspeck, Aug. 49, 19.
Live lobsters flown from Mexican waters, Feb. 48, 25.
Maine lobsters take air to market on air express, May 48, 1.
Park flying frozen crabmeat from Alaska by the planeload, Jan. 48, 7.

General and miscellaneous

Changes in cooling and transportation technique suggested for the marketing of fresh "Fresh" fish, W. A. MacCallum, Sept. 49, 11.
Conditions of storage during transportation of salt fish, R. Legendre, Aug. 50, 9.

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Discuss fish packing and shipping, July 48, 15.
Do pallets cut shipping costs? David M. Daly, Apr. 48, 3.
Fiberglas-insulated shipping containers for frozen shrimps, July 49, 1.
Fresh fish express announced by Norwegians, May 48, 7.
Frozen food transportation and distribution, A. L. Reneau, Feb. 50, 1.
Refrigerated shipment of frozen seafood and handling during marketing, Harry R. Beard, July 50, 5.
Shipping of fish and seafoods, Feb. 50, 11.
Some technological aspects of the fresh and frozen seafood industry, Harry R. Beard, Sept. 50, 17.

Rail shipment

Canada tests fish freezing train, July 48, 7.
Coast to coast test of refrigerator car successful, Feb. 50, 25.
Icing of refrigerator cars, S. A. Beatty, Sept. 48, 19.
New refrigerator car proves successful, June 49, 7.
Refrigerator car experiments. VI. A mechanically refrigerated car, O. C. Young, A. W. Lantz, D. H. Taylor, May 49, 17.
Refrigerator car experiment. VII. Road test with a mechanical car under heating conditions, O. C. Young, D. H. Taylor, Aug. 49, 1.
Refrigerator car experiments. IX. Further road tests with a mechanical car, O. C. Young, Aug. 50, 15.
Refrigerator car road tests with new cooling mixtures, J. M. Carbert, E. A. Rooke, W. H. Cook, Nov. 48, 13.
Refrigerator car tests. V, D. H. Taylor, J. S. M. Harrison, July 48, 25.
Performance tests on refrigeration cars, W. T. Pentzer, May 50, 15.
Shipping frozen food by rail, Mar. 48, 19.
Special ice-salt mixture may lower refrigerator car temperatures, J. M. Carbert, W. H. Cook, June 48, 11.
Union Pacific installs container engineering service, Warren R. White, Apr. 48, 19.

Truck shipment

Frozen seafood shipped cross country by truck, Jan. 50, 33.
Some essentials of truck trailer refrigeration, Douglas Albert, Feb. 48, 27.
Trucks rush fish catch from boats to canneries, Apr. 49, 19.
Truck-trailer industry moves to keep abreast frozen food progress. Part I, J. B. Hulse, Jan. 48, 5.
Truck-trailer industry moves to keep abreast frozen food progress. Part II, J. B. Hulse, Mar. 48, 5.
Truck-trailer refrigeration, Douglas Albert, Apr. 48, 7.

TUNA

Canning

Jack Gorby invents tuna can filling machine, July 49, 7.
Machine packed tuna now possible, Jan. 50, 13.
Salmon, tuna cannery equipment wins praise, June 50, 19.
Strained tuna baby food, June 50, 1.
Tuna canning in British Columbia, Peter Madison, Nov. 48, 9.

Fishing methods and gear

Canadian fishermen prepare to try floating set-lines for albacore, Oct. 48, 5.
Fiji-based tuna fleet will supply cannery built in American territory, Jan. 49, 3.

Fishing methods and gear (Cont'd)

Hydraulic power drives all auxiliaries of new tuna seiner, Aug. 49, 1.
Japanese fished tuna with suspended set lines, Jan. 48, 19.
Japanese long-line fishery for tunas, S. Shapiro, Sept. 50, 3.
Japanese tuna fisheries, S. Shapiro, Kalsuzo Kuronuma, Aug. 48, 3.
Mechanical fisherman, June 48, 3.
Nylon and linen seines 10 strips deep to be tried on mid-ocean tuna, Aug. 50, 21.
Scofield tries Japanese long-lining on albacore, June 50, 21.
Tuna bait-catching held function of specialists, Apr. 50, 9.
With British Columbia's tuna fishermen, Peter Madison, Jan. 49, 9.

General and miscellaneous

Alaskan albacore explorers pin-point positions of tuna schools with loran, Mar. 50, 11.
Albacore tuna exploration in Alaskan and adjacent waters - 1949, Donald E. Powell, Henry A. Hildebrand, Sept. 50, 3.
Australian tuna rated equal to California, Jan. 50, 5.
Canadian albacore taken close-in from cold water, Jan. 49, 9.
Canadians report new data on their albacore fishery, Feb. 49, 9.
Canned fish hand - i - book, July 50, 3.
Fishery exploration in the Hawaiian Islands, Howard H. Eckles, Feb. 50, 19.
General aspects of the world's tuna fisheries, Feb. 50, 21.
Hawaiian tuna packers explore with big clipper, Apr. 49, 9.
Little tuna of the Atlantic and Gulf coasts, Cyrus H. Chilton, Apr. 50, 7.
Mexican problem: U. S. - Mexican authorities meet to iron out difficulties, Mar. 49, 5.
New argonauts push hunt for tuna to South Pacific, D. G. Brazier, Mar. 48, 1.
New tuna fleet sails from Houston, Texas for Pacific waters, Sept. 49, 5.
North Atlantic tuna, Donald S. Ross, May 49, 15.
Nutritive value of canned foods. XXV. Vitamin content of canned fish products, J. B. Neilands, F. M. Strong, C. A. Elvehjem, Mar. 48, 15.
Origin of the histamine present in the tunny fish flesh responsible for group poisonings, R. Legroux, Jean Levaditi, Nov. 48, 23.
Pacific tuna fisheries (Japan, U.S.A. and Australia), Apr. 49, 7.
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Stability of vitamin A acetate under laboratory conditions, M. E. Chilcote, N. B. Guerrant, H. A. Ellenberger, Oct. 49, 19.
Stability test for vitamin A in fish oil, Lyle A. Swain, June 50, 9.
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Synthetic animal protein factor still must pass feed lot test, L. V. Zelle, Sept. 49, 3.

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Some properties of an unidentified chick growth factor found in condensed fish solubles, A. R. Robblee, et al, July 48, 7.
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Effect of animal protein factor on lowering protein needs of the pig, T. J. Cunha, et al, Aug. 50, 19.
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Small herring ring netters are swelling Britian's fish fleet, Geoffrey C. Trout, Mar. 50, 5.
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New camera can check on hull damage under water, Bill Crane, Feb. 49, 5.
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Whaling again sweeps the seas, May 50, 9.

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Chromatographic estimation of vitamin A in whale liver oil, N. T. Gridgeman, G. T. Gibson, J. P. Savage, May 49, 9.
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Better meat from whales, July 48, 11.
British whaler brings back whale meat canned at sea, Oct. 49, 21.
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Description of white whale hunting and prospects for its development in the Soviet north, S. K. Klumov, Apr. 48, 9.
International whaling race slated for Antarctic, Feb. 49, 13.
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Norway now fourth fishing country after Japan, U.S.A. and Soviet Union, Nov. 49, 5.
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Once famous New England industry may be revived, July 49, 11.
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Whaling comes back to the British Columbia coast, Mar. 49, 15.
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